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(54) **HIV-1- AND HIV-2-PEPTIDES FOR INHIBITION OF MEMBRANE FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION**

HIV-1- UND HIV-2-PEPTIDE ZUR HEMMUNG VON MIT MEMBRANFUSIONEN IN ZUSAMMENHANG STEHENDEN PHÄNOMENEN, EINSCHLIESSLICH DER ÜBERTRAGUNG VON HIV

PEPTIDES HIV-1- ET HIV-2 POUR EMPECHER CERTAINS PHENOMENES ASSOCIES AVEC LA FUSION AVEC LA MEMBRANE, EN PARTICULIER LA TRANSMISSION DU VIH

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Description

1. INTRODUCTION

[0001] The present invention relates, first, to DP178 (SEQ ID NO:1), a peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} transmembrane protein (TM) gp41, and portions or analogs of DP178 (SEQ ID NO:1), which exhibit anti-membrane fusion capability, antiviral activity, such as the ability to inhibit HIV transmission to uninfected CD-4^+ cells, or an ability to modulate intracellular processes involving coiled-coil peptide structures. Further, the invention relates to the use of DP178 (SEQ ID NO:1) and DP178 portions and/or analogs as antifusogenic or antiviral compounds or as inhibitors of intracellular events involving coiled-coil peptide structures. The present invention also relates to peptides analogous to DP107 (SEQ ID NO:25), a peptide corresponding to amino acids 558 to 595 of the HIV-1_{LAI} transmembrane protein (TM) gp41, having amino acid sequences present in other viruses, such as enveloped viruses, and/or other organisms, and further relates to the uses of such peptides. These peptides exhibit anti-membrane fusion capability, antiviral activity, or the ability to modulate intracellular processes involving coiled-coil peptide structures. The present invention additionally relates to methods for identifying compounds that disrupt the interaction between DP178 and DP107, and/or between DP107-like and DP178-like peptides. Further, the invention relates to the use of the peptides of the invention as diagnostic agents. For example, a DP178 peptide may be used as an HIV subtype-specific diagnostic. The invention is demonstrated, first, by way of an Example wherein DP178 (SEQ ID:1), and a peptide whose sequence is homologous to DP178 are each shown to be potent, non-cytotoxic inhibitors of HIV-1 transfer to uninfected CD-4^+ cells. The invention is further demonstrated by Examples wherein peptides having structural and/or amino acid motif similarity to DP107 and DP178 are identified in a variety of viral and nonviral organisms, and in examples wherein a number of such identified peptides derived from several different viral systems are demonstrated to exhibit antiviral activity.

2. BACKGROUND OF THE INVENTION

2.1 MEMBRANE FUSION EVENTS

[0002] Membrane fusion is a ubiquitous cell biological process (for a review, see White, J.M., 1992, Science 258: 917-924). Fusion events which mediate cellular housekeeping functions, such as endocytosis, constitutive secretion, and recycling of membrane components, occur continuously in all eukaryotic cells.

[0003] Additional fusion events occur in specialized cells. Intracellularly, for example, fusion events are involved in such processes as occur in regulated exocytosis of hormones, enzymes and neurotransmitters. Intercellularly, such fusion events feature prominently in, for example, sperm-egg fusion and myoblast fusion.

[0004] Fusion events are also associated with disease states. For example, fusion events are involved in the formation of giant cells during inflammatory reactions, the entry of all enveloped viruses into cells, and, in the case of human immunodeficiency virus (HIV), for example, are responsible for the virally induced cell-cell fusion which leads to cell death.

2.2. THE HUMAN IMMUNODEFICIENCY VIRUS

[0005] The human immunodeficiency virus (HIV) has been implicated as the primary cause of the slowly degenerative immune system disease termed acquired immune deficiency syndrome (AIDS) (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo, R. et al., 1984, Science 224:500-503). There are at least two distinct types of HIV: HIV-1 (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo R. et al., 1984, Science 224:500-503) and HIV-2 (Clavel, F. et al., 1986, Science 233:343-346; Guyader, M. et al., 1987, Nature 326:662-669). Further, a large amount of genetic heterogeneity exists within populations of each of these types. Infection of human CD-4^+ T-lymphocytes with an HIV virus leads to depletion of the cell type and eventually to opportunistic infections, neurological dysfunctions, neoplastic growth, and ultimately death.

[0006] HIV is a member of the lentivirus family of retroviruses (Teich, N. et al., 1984, RNA Tumor Viruses, Weiss, R. et al., eds., CSH-Press, pp. 949-956). Retroviruses are small enveloped viruses that contain a diploid, single-stranded RNA genome, and replicate via a DNA intermediate produced by a virally-encoded reverse transcriptase, an RNA-dependent DNA polymerase (Varmus, H., 1988, Science 240:1427-1439). Other retroviruses include, for example, oncogenic viruses such as human T-cell leukemia viruses (HTLV-I,-II,-III), and feline leukemia virus.

[0007] The HIV viral particle consists of a viral core, composed of capsid proteins, that contains the viral RNA genome and those enzymes required for early replicative events. Myristylated Gag protein forms an outer viral shell around the viral core, which is, in turn, surrounded by a lipid membrane enveloped derived from the infected cell membrane. The HIV enveloped surface glycoproteins are synthesized as a single 160 Kd precursor protein which is cleaved by a cellular protease during viral budding into two glycoproteins, gp41 and gp120. gp41 is a transmembrane protein and gp120 is an extracellular protein which remains non-covalently associated with gp41, possibly in a trimeric or multimeric form

(Hammarskjold, M. and Rekosh, D., 1989, Biochem. Biophys. Acta 989:269-280).

[0008] HIV is targeted to CD-4$^+$ cells because the CD-4 cell surface protein acts as the cellular receptor for the HIV-1 virus (Dalgleish, A. et al., 1984, Nature 312:763-767; Klatzmann et al., 1984, Nature 312:767-768; Maddon et al., 1986, Cell 47:333-348). Viral entry into cells is dependent upon gp120 binding the' cellular CD-4$^+$ receptor molecules (McDougal, J.S. et al., 1986, Science 231:382-385; Maddon, P.J. et al., 1986, Cell 47:333-348) and thus explains HIV's tropism for CD-4$^+$ cells, while gp41 anchors the enveloped glycoprotein complex in the viral membrane.

2.3. HIV TREATMENT

[0009] HIV infection is pandemic and HIV associated diseases represent a major world health problem. Although considerable effort is being put into the successful design of effective therapeutics, currently no curative anti-retroviral drugs against AIDS exist. In attempts to develop such drugs, several stages of the HIV life cycle have been considered as targets for therapeutic intervention (Mitsuya, H. et al., 1991, FASEB J. 5:2369-2381). For example, virally encoded reverse transcriptase has been one focus of drug development. A number of reverse-transcriptase-targeted drugs, including 2',3'-dideoxynucleoside analogs such as AZT, ddI, ddC, and d4T have been developed which have been shown to been active against HIV (Mitsuya, H. et al., 1991, Science 249:1533-1544). While beneficial, these nucleoside analogs are not curative, probably due to the rapid appearance of drug resistant HIV mutants (Lander, B. et al., 1989, Science 243:1731-1734). In addition, the drugs often exhibit toxic side effects such as bone marrow suppression, vomiting, and liver function abnormalities.

[0010] Attempts are also being made to develop drugs which can inhibit viral entry into the cell, the earliest stage of HIV infection. Here, the focus has thus far been on CD4, the cell surface receptor for HIV. Recombinant soluble CD4, for example, has been shown to inhibit infection of CD-4$^+$ T-cells by some HIV-1 strains (Smith, D.H. et al., 1987, Science 238:1704-1707). Certain primary HIV-1 isolates, however, are relatively less sensitive to inhibition by recombinant CD-4 (Daar, E. et al., 1990, Proc. Natl. Acad. Sci. USA 87:6574-6579). In addition, recombinant soluble CD-4 clinical trials have produced inconclusive results (Schooley, R. et al., 1990, Ann. Int. Med. 112:247-253; Kahn, J.O. et al., 1990, Ann. Int. Med. 112:254-261; Yarchoan, R. et al., 1989, Proc. Vth Int. Conf. on AIDS, p. 564, MCP 137).

[0011] The late stages of HIV replication, which involve crucial virus-specific secondary processing of certain viral proteins, have also been suggested as possible anti-HIV drug targets. Late stage processing is dependent on the activity of a viral protease, and drugs are being developed which inhibit this protease (Erickson, J., 1990, Science 249:527-533). The clinical outcome of these candidate drugs is still in question.

[0012] Attention is also being given to the development of vaccines for the treatment of HIV infection. The HIV-1 enveloped proteins (gp160, gp120, gp41) have been shown to be the major antigens for anti-HIV antibodies present in AIDS patients (Barin, et al., 1985, Science 228:1094-1096). Thus far, therefore, these proteins seem to be the most promising candidates to act as antigens for anti-HIV vaccine development. To this end, several groups have begun to use various portions of gp160, gp120, and/or gp41 as immunogenic targets for the host immune system. See for example, Ivanoff, L. et al., U.S. Pat. No. 5,141,867; Saith, G. et al., WO 92/22,654; Shafferman, A., WO 91/09,872; Formoso, C. et al., WO 90/07,119. Clinical results concerning these candidate vaccines, however, still remain far in the future.

[0013] Wild et al., (Proc. Natl. Acad. Sci. USA, Vol. 89, pp10537-10541, Nov. 1992) describes a synthetic peptide containing amino acid residues 558-595 of the envelope glycoprotein gp160 of human immunodeficiency virus type I strain LAI. This peptide efficiently blocked virus-mediated cell-cell fusion processes as well as infection of peripheral blood mononuclear cells by both prototypic and primary isolates of HIV-1. Wild et al., (Proc. Natl. Acad. Sci. USA, Vol. 91, pp12676-12680, Dec. 1994) illustrates a correlation between the destabilizing effects of amino acid substitutions on coiled-coil structures in the peptide model of HIV-1 and phenotype of virus entry. Wild et al., (Proc. Natl. Acad. Sci. USA, Vol. 91 pp9770-9774, Oct. 1994) describes a synthetic peptide corresponding to residue 643-678 of the HIV-1_{LAI} isolate as being a potent antiviral agent, and which blocks an early step in the virus life cycle prior to reverse transcription.

[0014] US Patent Number 5,464,933 (priority date 7th June 1993, publication date 7th November 1995) relates to peptides which exhibit potent anti-retroviral activity. These peptides correspond to amino acids 638 to 673 of the HIV-1_{LAI} gp41 protein. WO 94/28920 (priority date 7th June 1993, publication date 22nd December 1994) relates to peptides which exhibit potent anti-retroviral activity. These peptides correspond to amino acids 638 to 673 of the HIV-1_{LAI} gp41 protein. WO 96/40191 (priority date 7th June 1995, publication date 19th December 1996) describes novel antiviral combinations for the treatment or prevention of viral infections, in particular, HIV, employing DP-178 or DP-107 viral fusion inhibitors in combination with at least one other antiviral therapeutic agent.

[0015] Thus, although a great deal of effort is being directed to the design and testing of anti-retroviral drugs, a truly effective, non-toxic treatment is still needed.

3. SUMMARY OF THE INVENTION

[0016] The present invention relates, first, to an isolated HIV-1 or HIV-2 peptide having the formula:

X-NKSLEQIWNNMTWMEWDREINNYTSLIHSLIEESQN
QQEKNEQELLELDKWASLWNWF-Z,
X-SLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQ-Z,
X-LEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQE-Z,
X-EQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEK-Z,
X-QIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKN-Z,
X-IWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNE-Z,
X-WNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQ-Z,
X-NNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQE-Z,
X-NMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQEL-Z,
X-MTWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z,
X-TWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z,
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLEL-Z,
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z,
X-WMEWDREINNYTSLIGSLIEESQNQQEKNEQELLE-Z,
X-MEWDREINNYTSLIHSLIEESQNQQEKNEQELLELD-Z,
X-EWDREINNYTSLIHSLIEESQNQQEKNEQELLELDK-Z,
X-WDREINNYTSLIHSLIEESQNQQEKNEQELLELDKW-Z,
X-DREINNYTSLIHSLIEESQNQQEKNEQELLELDKWA-Z,
X-REINNYTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z,
X-EINNYTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z,
X-INNYTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z,
X-NYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z,
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNITNWLWLIKFI-Z,
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFN-Z,
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNI-Z,
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWFNIT-Z,
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNAF-Z,
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLANWF-Z,
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKNEQELLQLDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKNQQELLQLDKWASLWNWF-Z,

X-YTSLIHSLQEESQNQQEKNEQELLELDKWASLWNWF-Z,
X-YTSLIHSLIEQSQNQQEKNEQELLELDKWASLWNWF-Z,
X-YTSLIHSLIQESQNQQEKNEQELLELDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z,
X-YTSLIQSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLFNFF-Z,
X-YTSLIHSLIEESQNLQEKNEQELLELDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKLEQELLELDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKNEQELLEFDKWASLWNWF-Z,
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASPWNWF-Z,
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNSF-Z, or
X-LRAIEAQQHLLQLTVWQIKQLQARILAV-Z,

an isolated respiratory syncytial virus peptide having the formula:

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z,
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z,
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z,
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z,
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z,
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z,
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z,
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z,
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z,
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z,
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z,
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z,
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z,
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z,
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z,
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z,
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z,
X-FDASISQVNEKINQSLAFIRKSDELLHNVNA-Z, or
X-FDASISQVNEKINQSLAFIRKSDELL-Z,

an isolated influenza A peptide having the formula:

X-QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQDLEKYVEDTKIDL
WSYNAELLVALENQHTI-Z, or
X-AADLKSTQAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQDLEKYVED

TKIDLWSYNAELLVALENQHTIDLT-Z,

an isolated Epstein-Barr virus peptide having the formula:

X-SELEIKRYKNRVASKRKCRAKFKQLLQHYREVAAAK-Z,
X-CRAKFKQLLQHYREVAAAKSSENDRLRLLLKQMCP-Z,
X-AKFKQLLQHYREVAAAKSSENDRLRLLLKQMCPSL-Z,
X-KQLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVD-Z, or
X-QLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVDS-Z,

an isolated measles virus peptide having the formula:

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEDAKELL-Z,
X-HRIDLGPPISLERLDVGTNLGNAIAKLEDAKELLE-Z,
X-RIDLGPPISLERLDVGTNLGNAIAKLEDAKELLES-Z,
X-IDLGPPISLERLDVGTNLGNAIAKLEDAKELLESS-Z,
X-DLGPPISLERLDVGTNLGNAIAKLEDAKELLESSD-Z,
X-LGPPISLERLDVGTNLGNAIAKLEDAKELLESSDQ-Z,
X-GPPISLERLDVGTNLGNAIAKLEDAKELLESSDQI-Z,
X-PPISLERLDVGTNLGNAIAKLEDAKELLESSDQIL-Z,
X-PISLERLDVGTNLGNAIAKLEDAKELLESSDQILR-Z,
X-SLERLDVGTNLGNAIAKLEDAKELLESSDQILRSM-Z, or
X-LERLDVGTNLGNAIAKLEDAKELLESSDQILRSMK-Z,

an isolated hepatitis B virus peptide having the formula:

X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGGTTVCLGQNSQSP-Z,
X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGT-Z,
X-LLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTT-Z,
X-LVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTV-Z,
X-LQAGFFLLTRILTIPQSLDSWWTSLNGLGGTTVCL-Z,
X-QAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLG-Z,
X-AGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQ-Z,
X-GFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQN-Z,
X-FFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNS-Z,
X-FLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQ-Z,
X-LLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQS-Z,
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMTT-Z,
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML-Z,
X-GYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLP-Z,
X-YRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPV-Z,
X-RWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVC-Z,
X-WMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP-Z,

X-MCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPI-Z,
X-CLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLI-Z,
X-LRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIP-Z,
X-RRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPG-Z,
X-RFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGS-Z,
X-FIIFLFILLLCLIFLLVLLDYQGMLPVCPLIGGSS-Z,
X-IIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSST-Z,
X-IFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTS-Z,
X-FLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTST-Z,
X-LFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTG-Z,
X-FILLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGP-Z,
X-ILLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPC-Z,
X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCR-Z,
X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRT-Z,
X-LCLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTC-Z,
X-CLIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCM-Z,
X-LIFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMT-Z, or
X-IFLLVLLDYQGMLPVCPLIPGSSTSTGPCRTCMTT-Z,

in which amino acid residues are presented by the single-letter code, X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group, and Z comprises a carboxyl

group, an amido group, a T-butoxycarbonyl group, or a macromolecular carrier group.

[0017] The present invention also relates to the use of the peptides above in the manufacture of medicaments for the treatment of Human Immuno-Deficiency Virus type 1 or type 2, Respiratory Syncytial Virus, Influenza Type A, Epstein-Barr virus, measles and Hepatitis B virus.

[0018] DP178 (SEQ ID:1) is a 36-amino acid synthetic peptide corresponding to amino acids 638 to 673 of the transmembrane protein (TM) gp41 from the HIV-1 isolate LAT (HIV-1_{LAI}), which exhibits potent anti-HIV-1 activity. As evidenced by the Example presented below, in Section 6, the DP178 (SEQ ID:1) antiviral activity is so high that, on a weight basis, no other known anti-HIV agent is effective at concentrations as low as those at which DP178 (SEQ ID:1) exhibits its inhibitory effects.

[0019] Portions and analogs of DP178 also show an antiviral activity, and show an anti-membrane fusion capability, or an ability to modulate intracellular processes involving coiled-coil peptide structures. The term "DP178 analog" refers to a peptide which contains an amino acid sequence corresponding to the DP178 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and/or organisms other than HIV-1_{LAI}. Such DP178 analog peptides may, therefore, correspond to DP178-like amino acid sequences present in other viruses, such as, for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such analogous DP178 peptides may also correspond to DP178-like amino acid sequences present in nonviral organisms.

[0020] DP107 is a peptide corresponding to amino acids 558-595 of the HIV-1_{LAI} transmembrane protein (TM) gp41. The term "DP107 analog" as used herein refers to a peptide which contains an amino acid sequence corresponding to the DP107 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and organisms other than HIV-1_{LAI}. Such DP107 analog peptides may, therefore, correspond to DP107-like amino acid sequences present in other viruses, such as, for for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such DP107 analog peptides may also correspond to DP107-like amino acid sequences present in nonviral organisms.

[0021] The peptides of the invention may, for example, exhibit antifusogenic activity, antiviral activity, and/or may have the ability to modulate intracellular processes which involve coiled-coil peptide structures. With respect to the antiviral activity of the peptides of the invention, such an antiviral activity includes, but is not limited to the inhibition of HIV transmission to uninfected CD-4$^+$ cells. Additionally, the antifusogenic capability, antiviral activity or intracellular modulatory activity of the peptides of the invention merely requires the presence of the peptides of the invention, and, specifically, does not require the stimulation of a host immune response directed against such peptides.

[0022] The peptides of the invention may be used, for example, as inhibitors of membrane fusion-asociated events, such as, for example, the inhibition of human and non-human retroviral, especially HIV, transmission to uninfected cells. It is further contemplated that the peptides of the invention may be used as modulators of intracellular events involving coiled-coil peptide structures.

[0023] The peptides of the invention may, alternatively, be used to identify compounds which may themselves exhibit antifusogenic, antiviral, or intracellular modulatory activity. Additional uses include, for example, the use of the peptides of the invention as organism or viral type and/or subtype-specific diagnostic tools.

[0024] The terms "antifusogenic" and "anti-membrane fusion", as used herein, refer to an agent's ability to inhibit or reduce the level of membrane fusion events between two or more moieties relative to the level of membrane fusion which occurs between said moieties in the absence of the peptide. The moieties may be, for example, cell membranes or viral structures, such as viral envelopes or pili. The term "antiviral", as used herein, refers to the compound's ability to inhibit viral infection of cells, via, for example, cell-cell fusion or free virus infection. Such infection may involve membrane fusion, as occurs in the case of enveloped viruses, or some other fusion event involving a viral structure and a cellular structure (e.g., such as the fusion of a viral pilus and bacterial membrane during bacterial conjugation).

[0025] It is also contemplated that the peptides of the invention may exhibit the ability to modulate intracellular events involving coiled-coil peptide structures. "Modulate", as used herein, refers to a stimulatory or inhibitory effect on the intracellular process of interest relative to the level or activity of such a process in the absence of a peptide of the invention.

[0026] Embodiments of the invention are demonstrated below wherein an extremely low concentration of DP178 (SEQ ID:1), and very low concentrations of a DP178 homolog (SEQ ID:3) are shown to be potent inhibitors of HIV-1 mediated CD-4$^+$ cell-cell fusion (i.e., syncytial formation) and infection of CD-4$^+$ cells by cell-free virus. Further, it is shown that DP178 (SEQ ID:1) is not toxic to cells, even at concentrations 3 logs higher than the inhibitory DP-178 (SEQ ID:1) concentration.

[0027] The present invention is based, in part, on the surprising discovery that the DP107 and DP178 domains of the HIV gp41 protein non-covalently complex with each other, and that their interaction is required for the normal infectivity of the virus. This discovery is described in the Example presented, below, in Section 8. The invention, therefore, further relates to methods for identifying antifusogenic, including antiviral, compounds that disrupt the interaction between DP107 and DP178, and/or between DP107-like and DP178-like peptides.

3.1. DEFINITIONS

[0028] Peptides are defined herein as organic compounds comprising two or more amino acids covalently joined by peptide bonds. Peptides may be referred to with respect to the number of constituent amino acids, i.e., a dipeptide contains two amino acid residues, a tripeptide contains three, etc. Peptides containing ten or fewer amino acids may be referred to as oligopeptides, while those with more than ten amino acid residues are polypeptides. Such peptides may also include any of the modifications and additional amino and carboxy groups as are described herein.

[0029] Peptide sequences defined herein are represented by one-letter symbols for amino acid residues as follows:

A (alanine)
R (arginine)
N (asparagine)
D (aspartic acid)
C (cysteine)
Q (glutamine)
E (glutamic acid)
G (glycine)
H (histidine)
I (isoleucine)
L (leucine)
K (lysine)
M (methionine)
F (phenylalanine)
P (proline)
S (serine)
T (threonine)
W (tryptophan)
Y (tyrosine)
V (valine)

[0030] The following description relates to various peptides identified in terms of search motifs described hereafter. The amino acid sequences of the present invention are all encompassed by the search motif ALLMOTI5. Amino acid sequences encompassed by all other search motifs and not the ALLMOTI5 search motif are excluded from the present invention. Also, amino acid sequences encompassed by ALLMOTI5 and not within the scope of the present claims are excluded.

4. BRIEF DESCRIPTION OF THE FIGURES

[0031] FIG. 1. Amino acid sequence of DP178 (SEQ ID:1) derived from HIV_{LAI}; DP178 homologs derived from HIV-1_{SF2} (DP-185; SEQ ID:3), HIV-1_{RF} (SEQ ID:4), and HIV-1_{MN} (SEQ ID:5); DP178 homologs derived from amino acid sequences of two prototypic HIV-2 isolates, namely, HIV-2_{rod} (SEQ ID:6) and HIV-2_{NIHZ} (SEQ ID:7); control peptides: DP-180 (SEQ ID:2), a peptide incorporating the amino acid residues of DP178 in a scrambled sequence; DP-118 (SEQ ID:10) unrelated to DP178, which inhibits HIV-1 cell free virus infection; DP-125 (SEQ ID:8), unrelated to DP178, also inhibits HIV-1 cell free virus infection; DP-116 (SEQ ID:9), unrelated to DP178, is negative for inhibition of HIV-1 infection when tested using a cell-free virus infection assay. Throughout the figures, the one letter amino acid code is used.

[0032] FIG. 2. Inhibition of HIV-1 cell-free virus infection by synthetic peptides. IC_{50} refers to the concentration of peptide that inhibits RT production from infected cells by 50% compared to the untreated control. Control: the level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

[0033] FIG. 3. Inhibition of HIV-1 and HIV-2 cell-free virus infection by the synthetic peptide DP178 (SEQ ID:1). IC_{50}: concentration of peptide that inhibits RT production by 50% compared to the untreated control. Control: Level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

[0034] FIG. 4A-4B. Fusion Inhibition Assays. FIG 4A: DP178 (SEQ ID:1) inhibition of HIV-1 prototypic isolate-inediated syncytial formation; data represents the number of virus-induced syncytial per cell. FIG. 4B: DP-180 (SEQ ID:2) represents a scrambled control peptide; DP-185 (SEQ ID:3) represents a DP178 homolog derived from HIV-1_{SF2} isolate; Control, refers to the number of syncytial produced in the absence of peptide.

[0035] FIG. 5. Fusion inhibition assay: HIV-1 vs. HIV-2. Data represents the number of virus-induced syncytial per well. ND: not done.

[0036] FIG. 6. cytotoxicity study of DP178 (SEQ ID:1) and DP-116 (SEQ ID:9) on CEM cells. Cell proliferation data is

shown.

[0037] FIG. 7. Schematic representation of HIV-gp41 and maltose binding protein (MBP)-gp41 fusion proteins. DP107 and DP178 are synthetic peptides based on the two putative helices of gp41. The letter P in the DP107 boxes denotes an Ile to Pro mutation at amino acid number 578. Amino acid residues are numbered according to Meyers et al., "Human Retroviruses and AIDS", 1991, Theoret. Biol. and Biophys. Group, Los Alamos Natl. Lab., Los Alamos, NM. The proteins are more fully described, below, in Section 8.1.1.

[0038] FIG. 8. A point mutation alters the conformation and anti-HIV activity of M41.

[0039] FIG. 9. Abrogation of DP178 anti-HIV activity. Cell fusion assays were carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41PΔ178.

[0040] FIG. 10. Binding of DP178 to leucine zipper of gp41 analyzed by FAb-D ELISA.

[0041] FIG. 11A-B. Models for a structural transition in the HIV-1 TM protein. Two models are proposed which indicate a structural transition from a native oligomer to a fusogenic state following a trigger event (possibly gp120 binding to CD4). Common features of both models include (1) the native state is held together by noncovalent protein-protein interactions to form the heterodimer of gp120/41 and other interactions, principally though gp41 interactive sites, to form homo-oligomers on the virus surface of the gp120/41 complexes; (2) shielding of the hydrophobic fusogenic peptide at the N-terminus (F) in the native state; and (3) the leucine zipper domain (DP107) exists as a homo-oligomer coiled coil only in the fusogenic state. The major differences in the two models include the structural state (native or fusogenic) in which the DP107 and DP178 domains are complexed to each other. In the first model (FIG. 11A) this interaction occurs in the native state and in the second (FIG. 11B), it occurs during the fusogenic state. When triggered, the fusion complex in the model depicted in (A) is generated through formation of coiled-coil interactions in homologous DP107 domains resulting in an extended α-helix. This conformational change positions the fusion peptide for interaction with the cell membrane. In the second model (FIG. 11B), the fusogenic complex is stabilized by the association of the DP178 domain with the DP107 coiled-coil.

[0042] FIG. 12. Motif design using heptad repeat positioning of amino acids of known coiled-coils.

[0043] FIG. 13. Motif design using proposed heptad respeat positioning of amino acids of DP107 and DP178.

[0044] FIG. 14. Hybrid motif design crossing GCN4 and DP107.

[0045] FIG. 15. Hybrid motif design crossing GCN4 and DP178.

[0046] FIG. 16. Illustrative hybrid motif design 107x178x4, crossing DP107 and DP178. This motif was found to be the most consistent at identifying relevant DP107-like and DP178-like.peptide regions.

[0047] FIG. 17. Hybrid motif design crossing GCN4, DP107, and DP178.

[0048] FIG. 18. Hybrid motif design ALLMOTI5 crossing GCN4, DP107, DP178, c-Fos c-Jun, c-Myc, and Flu Loop 36.

[0049] FIG. 19. Illustrative PLZIP motifs designed to identify N-terminal proline-leucine zipper motifs.

[0050] FIG. 20. Search results for HIV-1 (BRU isolate) enveloped protein gp41. Sequence search motif designations: Spades (♠): 107x178x4; Hearts (♥) ALLMOTI5; Clubs (♣): PLZIP; Diamonds (♦): transmembrane region (the putative transmembrane domains were identified using a PC/Gene program designed to search for such peptide regions). Asterisk (*): Lupas method. The amino acid sequences identified by each motif are bracketed by the respective characters. Representative sequences chosen based on 107x178x4 searches are underlined and in bold. DP107 and DP178 sequences are marked, and additionally double-underlined and italicized.

[0051] FIG. 21. Search results for human respiratory syncytial virus (RSV) strain A2 fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

[0052] FIG. 22. Search results for simian immunodeficiency virus (SIV) enveloped protein gp41 (AGM3 isolate). Sequence search motif designations are as in FIG. 20.

[0053] FIG. 23. Search results for canine distemper virus (strain Onderstepoort) fusion glycoprotein 1. Sequence search motif designations are as in FIG. 20.

[0054] FIG. 24. Search results for newcastle disease virus (strain Australia-Victoria/32) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

[0055] FIG. 25. Search results for human parainfluenza 3 virus (strain NIH 47885) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

[0056] FIG. 26. Search results for influenza A virus (strain A/AICHI/2/68) hemagglutinin precursor HA2. Sequence search designations are as in FIG. 20.

[0057] FIG. 27A-D. Respiratory Syncytial Virus (RSV) peptide antiviral and circular dichroism data. FIG. 27A-B: Peptides derived from the F2 DP178/DP107-like region. Antiviral and CD data. FIG. 27C-D: Peptides derived from the F1 DP107-like region. Peptide and CD data.

[0058] Antiviral activity (AV) is represented by the following qualitative symbols:

"-", negative antiviral activity;

"+/-", antiviral activity at greater than 100μg/ml;

"+", antiviral activity at between 50-100μg/ml;
"++", antiviral activity at between 20-50μg/ml;
"+++", antiviral activity at between 1-20μg/ml;
"++++", antiviral activity at <1μg/ml.

[0059] CD data, referring to the level of helicity is represented by the following qualitative symbol:

"-", no helicity;
"+", 25-50% helicity;
"++", 50-75% helicity;
"+++"' 75-100% helicity.

[0060] IC_{50} refers to the concentration of peptide necessary to produce only 50% of the number or syncytial relative to infected control cultures containing no peptide. IC_{50} values were obtained using purified peptides only.

[0061] FIG. 28A-B. Respiratory Syncytial Virus (RSV) DP178-like region (F1) peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. IC_{50} values were obtained using purified peptides only.

[0062] FIG. 29A-B. Peptides derived from the HPIV3 F1 DP107-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

[0063] FIG. 30A-B. Peptides derived from the HPIV3 F1 DP178-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

[0064] FIG. 31. Motif search results for simian immunodeficiency virus (SIV) isolate MM251, enveloped polyprotein gp41. Sequence search designations are as in FIG. 20.

[0065] FIG. 32. Motif search results for Epstein-Barr Virus (Strain B95-8), glycoprotein gp110 precursor (designated gp115). BALF4. Sequence search designations are as in FIG. 20.

[0066] FIG. 33. Motif search results for Epstein-Barr Virus (Strain B95-8), BZLF1 trans-activator protein (designated EB1 or Zebra). Sequence search designations are as in FIG. 20. Additionally, "@" refers to a well known DNA binding domain and "+" refers to a well known dimerization domain, as defined by Flemington and Speck (Flemington, E. and Speck, S.H., 1990, Proc. Natl. Acad. Sci. USA 87:9459-9463).

[0067] FIG. 34. Motif search results for measles virus (strain Edmonston), fusion glycoprotein F1. Sequence search designations are as in FIG. 20.

[0068] FIG. 35. Motif search results for Hepatitis B Virus (Subtype AYW), major surface antigen precursor S. Sequence search designations are as in FIG. 20.

[0069] FIG. 36. Motif search results for simian Mason-Pfizer monkey virus, enveloped (TM) protein gp20. Sequence search designations are as in FIG. 20.

[0070] FIG. 37. Motif search results for Pseudomonas aerginosa, fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

[0071] FIG. 38. Motif search results for Neisseria gonorrhoeae fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

[0072] FIG. 39. Motif search results for Hemophilus influenzae fimbrial protein. Sequence search designations are as in FIG. 20.

[0073] FIG. 40. Motif search results for Staphylococcus aureus, toxic shock syndrome toxin-1. Sequence search designations are as in FIG. 20.

[0074] FIG. 41. Motif search results for Staphylococcus aureus enterotoxin Type E. Sequence search designations are as in FIG. 20.

[0075] FIG. 42. Motif search results for Staphylococcus aureus enterotoxin A. Sequence search designations are as in FIG. 20.

[0076] FIG. 43. Motif search results for Escherichia coli, heat labile enterotoxin A. Sequence search designations are as in FIG. 20.

[0077] FIG. 44. Motif search results for human c-fos proto-oncoprotein. Sequence search designations are as in FIG. 20.

[0078] FIG. 45. Motif search results for human lupus KU autoantigen protein P70. Sequence search designations are as in FIG. 20.

[0079] FIG. 46. Motif search results for human zinc finger protein 10. Sequence search designations are as in FIG. 20.

[0080] FIG. 47. Measles virus (MeV) fusion protein DP178-like region antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. IC_{50} values were obtained using purified peptides.

[0081] FIG. 48. Simian immunodeficiency virus (SIV) TM (fusion) protein DP178-like region antiviral data. Antiviral symbols are as in FIG. 27A-D "NT", not tested.

[0082] FIG. 49A-C. DP178-derived peptide antiviral data. The peptides listed herein were derived from the region surrounding the HIV-1 BRU isolate DP178 region (e.g., gp41 amino acid residues 615-717).

[0083] In instances where peptides contained DP178 point mutations, the mutated amino acid residues are shown with a shaded background. In instances in which the test peptide has had an amino and/or carboxy-terminal group added or removed (apart from the standard amido- and acetyl- blocking groups found on such peptides), such modifications are indicated. FIG. 49A: The column to the immediate right of the name of the test peptide indicates the size of the test peptide and points out whether the peptide is derived from a one amino acid peptide "walk" across the DP178 region. The next column to the right indicates whether the test peptide contains a point mutation, while the column to its right indicates whether certain amino acid residues have been added to or removed from the DP178-derived amino acid sequence. FIG 49B: The column to the immediate right of the test peptide name indicates whether the peptide represents a DP178 truncation, the next column to the right points out whether the peptide contains a point mutation, and the column to its right indicates whether the peptide contains amino acids which have been added to or removed from the DP178 sequence itself. FIG. 49C: The column to the immediate right of the test peptide name indicates whether the test peptide contains a point mutation, while the column to its right indicates whether amino acid residues have been added to or removed from the DP178 sequence itself. IC_{50} is as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

[0084] FIG. 50. DP107 and DP107 gp41 region truncated peptide antiviral data. IC_{50} as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

[0085] FIG. 51A-B. Epstein-Barr virus Strain B95-8 BZLF1 DP178/DP107 analog region peptide walks and electrophoretic mobility shift assay results. The peptides (T-423 to T-446, FIG. 51A; T-447 to T-461, FIG. 51B) represent one amino acid residue "walks" through the EBV Zebra protein region from amino acid residue 173 to 246.

[0086] The amino acid residue within this region which corresponds to the first amino acid residue of each peptide is listed to the left of each peptide, while the amino acid residue within this region which corresponds to the last amino acid residue of each peptide is listed to the right of each peptide. The length of each test peptide is listed at the far right of each line, under the heading "Res".

[0087] "ACT" refers to a test peptide's ability to inhibit Zebra binding to its response element. "+" refers to a visible, but incomplete, abrogation of the response element/Zebra homodimer complex; "+++" refers to a complete abrogation of the complex; and "-" represents a lack of complex disruption.

[0088] FIG. 52A-B. Hepatitis B virus subtype AYW major surface antigen precursor S protein DP178/DP107 analog region and peptide walks. 52A depicts Domain I (S protein amino acid residues 174-220), which contains a potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain I. 52B depicts Domain II (S protein amino acid residues 233-291), which contains a second potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain II.

5. DETAILED DESCRIPTION OF THE INVENTION

[0089] Described herein are peptides which may exhibit antifusogenic activity, antiviral capability, and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. The peptides described include, first, DP178 (SEQ ID NO:1), a gp41-derived 36 amino acid peptide and fragments and analogs of DP178.

[0090] In addition, the peptides of the invention described herein include peptides which are DP107 analogs. DP107 (SEQ ID NO:25) is a 38 amino acid peptide corresponding to residues 558 to 595 of the HIV-1_{LAI} transmembrane (TM) gp41 protein. Such DP107 analogs may exhibit antifusogenic capability, antiviral activity or an ability to modulate intracellular processes involving coiled-coil structures.

[0091] Also described here are antifusogenic, antiviral, intracellular modulatory, and diagnostic uses of the peptides of the invention. Further, procedures are described for the use of the peptides of the invention for the identification of compounds exhibiting antifusogenic, antiviral or intracellular modulatory activity.

[0092] While not limited to any theory of operation, the following model is proposed to explain the potent anti-HIV activity of DP178, based, in part, on the experiments described in the Examples, infra. In the HIV protein, gp41, DP178 corresponds to a putative α-helix region located in the C-terminal end of the gp41 ectodomain, and appears to associate with a distal site on gp41 whose interactive structure is influenced by the leucine zipper motif, a coiled-coil structure, referred to as DP107. The association of these two domains may reflect a molecular linkage or "molecular clasp" intimately involved in the fusion process. It is of interest that mutations in the C-terminal α-helix motif of gp41 (i.e., the D178 domain) tend to enhance the fusion ability of gp41, whereas mutations in the leucine zipper region (i.e., the DP107 domain) decrease or abolish the fusion ability of the viral protein. It may be that the leucine zipper motif is involved in membrane fusion while the C-terminal α-helix motif serves as a molecular safety to regulate the availability of the leucine zipper during virus-induced membrane fusion.

[0093] On the basis of the foregoing, two models are proposed of gp41-mediated membrane fusion which are schematically shown in FIG. 11A-B. The reason for proposing two models is that the temporal nature of the interaction between the regions defined by DP107 and DP178 cannot, as yet, be pinpointed. Each model envisions two conformations for gp41 - one in a "native" state as it might be found on a resting virion. The other in a "fusogenic" state to reflect conformational changes triggered following binding of gp120 to CD4 and just prior to fusion with the target cell membrane. The strong binding affinity between gp120 and CD4 may actually represent the trigger for the fusion process obviating the need for a pH change such as occurs for viruses that fuse within intracellular vesicles. The two major features of both models are: (1) the leucine zipper sequences (DP107) in each chain of oligomeric enveloped are held apart in the native state and are only allowed access to one another in the fusogenic state so as to form the extremely stable coiled-coils, and (2) association of the DP178 and DP107 sites as they exist in gp41 occur either in the native or fusogenic state. FIG. 11A depicts DP178/DP107 interaction in the native state as a molecular clasp. On the other hand, if one assumes that the most stable form of the enveloped occurs in the fusogenic state, the model in FIG. 11B can be considered.

[0094] When synthesized as peptides, both DP107 and DP178 are potent inhibitors of HIV infection and fusion, probably by virtue of their ability to form complexes with viral gp41 and interfere with its fusogenic process; e.g., during the structural transition of the viral protein from the native structure to the fusogenic state, the DP178 and DP107 peptides may gain access to their respective binding sites on the viral gp41, and exert a disruptive influence.

[0095] As shown in the Examples, infra, a truncated recombinant gp41 protein corresponding to the ectodomain of gp41 containing both DP107 and DP178 domains (excluding the fusion peptide, transmembrane region and cytoplasmic domain of gp41) did not inhibit HIV-1 induced fusion. However, when a single mutation was introduced to disrupt the coiled-coil structure of the DP107 domain -- a mutation which results in a total loss of biological activity of DP107 peptides -the inactive recombinant protein was transformed to an active inhibitor of HIV-1 induced fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107 domain.

[0096] For clarity of discussion, the invention will be described primarily for DP178 peptide inhibitors of HIV. However, the principles may be analogously applied to other viruses, both enveloped and nonenveloped, and to other non-viral organisms.

5.1. DP178 AND DP178-LIKE PEPTIDES

[0097] The DP178 peptide (SEQ ID:1) of the invention corresponds to amino acid residues 638 to 673 of the transmembrane protein gp41 from the HIV-1_{LAI} isolate, and has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:1)

[0098] In addition to the full-length DP178 (SEQ ID:1) 36-mer, the peptides of the invention may include truncations of the DP178 (SEQ ID:1) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. Truncations of DP178 (SEQ ID:1) peptides may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide), as shown in Tables I and IA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group (-NH_2) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE I
DP178 (SEQ ID:1) CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSL-Z
X-YTSLI-Z
X-YTSLIH-Z
X-YTSLIHS-Z
X-YTSLIHSL-Z
X-YTSLIHSLI-Z
X-YTSLIHSLIE-Z
X-YTSLIHSLIEE-Z
X-YTSLIHSLIEES-Z
X-YTSLIHSLIEESQ-Z
X-YTSLIHSLIEESQN-Z
X-YTSLIHSLIEESQNQ-Z
X-YTSLIHSLIEESQNQQ-Z
X-YTSLIHSLIEESQNQQE-Z
X-YTSLIHSLIEESQNQQEK-Z
X-YTSLIHSLIEESQNQQEKN-Z
X-YTSLIHSLIEESQNQQEKNE-Z
X-YTSLIHSLIEESQNQQEKNEQ-Z
X-YTSLIHSLIEESQNQQEKNEQE-Z
X-YTSLIHSLIEESQNQQEKNEQEL-Z
X-YTSLIHSLIEESQNQQEKNEQELL-Z
X-YTSLIHSLIEESQNQQEKNEQELLE-Z
X-YTSLIHSLIEESQNQQEKNEQELLEL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELD-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDK-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWA-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWN-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IA
DP178 (SEQ ID:1) AMINO TRUNCATIONS

X-NWF-Z
X-WNWF-Z
X-LWNWF-Z
X-SLWNWF-Z
X-ASLWNWF-Z
X-WASLWNWF-Z
X-KWASLWNWF-Z
X-DKWASLWNWF-Z
X-LDKWASLWNWF-Z
X-ELDKWASLWNWF-Z
X-LELDKWASLWNWF-Z
X-LLELDKWASLWNWF-Z
X-ELLELDKWASLWNWF-Z
X-QELLELDKWASLWNWF-Z
X-EQELLELDKWASLWNWF-Z
X-NEQELLELDKWASLWNWF-Z
X-KNEQELLELDKWASLWNWF-Z
X-EKNEQELLELDKWASLWNWF-Z
X-QEKNEQELLELDKWASLWNWF-Z
X-QQEKNEQELLELDKWASLWNWF-Z
X-NQQEKNEQELLELDKWASLWNWF-Z
X-QNQQEKNEQELLELDKWASLWNWF-Z
X-SQNQQEKNEQELLELDKWASLWNWF-Z
X-ESQNQQEKNEQELLELDKWASLWNWF-Z
X-EESQNQQEKNEQELLELDKWASLWNWF-Z
X-IEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-HSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-IHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

[0099] The peptides of the invention also include DP178-like peptides. "DP178-like", as used herein, refers, first, to DP178 and DP178 truncations which contain one or more amino acid substitutions, insertions and/or deletions. The DP178-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP178-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

[0100] HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP178-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP178 peptides of the invention. Utilizing the DP178 and DP178 analog sequences described herein, the skilled artisan can readily compile DP178 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred

amino acid substitutions.

[0101] The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids of similar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

[0102] Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP178 or DP178 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred.

[0103] Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP178 region of the gp41 protein.

[0104] Deletions of DP178 (SEQ ID:1) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP178 or DP178-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences.

[0105] DP178 analogs are further described, below, in Section 5.3.

5.2. DP107 AND DP107-LIKE PEPTIDES

[0106] Further, the peptides of the invention include peptides having amino acid sequences corresponding to DP107 analogs. DP107 is a 38 amino acid peptide which exhibits potent antiviral activity, and corresponds to residues 558 to 595 of HIV-1_{LAI} transmembrane (TM) gp41 protein, as shown here:

NH_2NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-COOH (SEQ ID:25)

[0107] In addition to the full-length DP107 (SEQ ID:25) 38-mer, the peptides of the invention may include truncations of the DP107 (SEQ ID:25) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. Truncations of DP107 (SEQ ID:25) peptides may comprise peptides of between 3 and 38 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 38-mer polypeptide), as shown in Tables II and IIA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group (-NH_2) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE II
DP107 (SEQ ID:25) CARBOXY TRUNCATIONS

X-NNL-Z
X-NNLL-Z
X-NNLLR-Z
X-NNLLRA-Z
X-NNLLRAI-Z
X-NNLLRAIE-Z
X-NNLLRAIEA-Z
X-NNLLRAIEAQ-Z
X-NNLLRAIEAQQ-Z
X-NNLLRAIEAQQH-Z
X-NNLLRAIEAQQHL-Z
X-NNLLRAIEAQQHLL-Z
X-NNLLRAIEAQQHLLQ-Z
X-NNLLRAIEAQQHLLQL-Z
X-NNLLRAIEAQQHLLQLT-Z
X-NNLLRAIEAQQHLLQLTV-Z
X-NNLLRAIEAQQHLLQLTVW-Z
X-NNLLRAIEAQQHLLQLTVWQ-Z
X-NNLLRAIEAQQHLLQLTVWQI-Z
X-NNLLRAIEAQQHLLQLTVWQIK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQAR-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARI-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARIL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAV-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVE-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVER-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERY-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKD-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IIA
DP178 (SEQ ID:25) AMINO TRUNCATIONS

X-KDQ- Z
X-LKDQ- Z
X-YLKDQ- Z
X-RYLKDQ- Z
X-ERYLKDQ- Z
X-VERYLKDQ- Z
X-AVERYLKDQ- Z
X-LAVERYLKDQ- Z
X-ILAVERYLKDQ- Z
X-RILAVERYLKDQ- Z
X-ARILAVERYLKDQ- Z
X-QARILAVERYLKDQ- Z
X-LQARILAVERYLKDQ- Z
X-QLQARILAVERYLKDQ- Z
X-KQLQARILAVERYLKDQ- Z
X-IKQLQARILAVERYLKDQ- Z
X-QIKQLQARILAVERYLKDQ- Z
X-WQIKQLQARILAVERYLKDQ- Z
X-VWQIKQLQARILAVERYLKDQ- Z
X-TVWQIKQLQARILAVERYLKDQ- Z
X-LTVWQIKQLQARILAVERYLKDQ- Z
X-QLTVWQIKQLQARILAVERYLKDQ- Z
X-LQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLQLTVWQIKQLQARILAVERYLKDQ- Z
X-HLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-EAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-IEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-RAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

[0108] The peptides of the invention also include DP107-like peptides. "DP107-like", as used herein, refers, first, to DP107 and DP107 truncations which contain one or more amino acid substitutions, insertions and/or deletions. The DP107-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP107-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

[0109] HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP107-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions

would include those amino acid changes which are predicted to stabilize the structure of the DP107 peptides of the invention. Utilizing the DP107 and DP107 analog sequences described herein, the skilled artisan can readily compile DP107 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

[0110] The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids of similar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

[0111] Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP107 or DP107 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred.

[0112] Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP107 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP107 region of the gp41 protein.

[0113] Deletions of DP107 (SEQ ID:25) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP107 or DP107-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences.

[0114] For the purposes of illustration only, the search strategy which was employed to identify the peptides of the present invention is described fully, below, in the Example presented in Section 9. While this search strategy is based, in part, on a primary amino acid motif deduced from DP107 and DP178, it is not based solely on searching for primary amino acid sequence homologies, as such protein sequence homologies exist within, but not between major groups of viruses. For example, primary amino acid sequence homology is high within the TM protein of different strains of HIV-1 or within the TM protein of different isolates of simian immunodeficiency virus (SIV). Primary amino acid sequence homology between HIV-1 and SIV, however, is low enough so as not to be useful. It is not possible, therefore, to find peptide regions similar to DP107 or DP178 within other viruses, or within non-viral organisms, whether structurally, or otherwise, based on primary sequence homology, alone.

[0115] Further, while it would be potentially useful to identify primary sequence arrangements of amino acids based on, for example, the physical chemical characteristics of different classes of amino acids rather than based on the specific amino acids themselves, such search strategies have, until now, proven inadequate. For example, a computer algorithm designed by Lupas et al. to identify coiled-coil propensities of regions within proteins (Lupas, A., et al., 1991 Science 252:1162-1164) is inadequate for identifying protein regions analogous to DP107 or DP178.

[0116] Specifically, analysis of HIV-1 gp160 (containing both gp120 and gp41) using the Lupas algorithm does not identify the coiled-coil region within DP107. It does, however, identify a region within DP178 beginning eight amino acids N-terminal to the start of DP178 and ending eight amino acids from the C-terminus. The DP107 peptide has been shown experimentally to form a stable coiled coil. A search based on the Lupas search algorithm, therefore, would not have identified the DP107 coiled-coil region. Conversely, the Lupas algorithm identified the DP178 region as a potential coiled-coil motif. However, the peptide derived from the DP178 region failed to form a coiled coil in solution.

[0117] A possible explanation for the inability of the Lupas search algorithm to accurately identify coiled-coil sequences within the HIV-1 TM, is that the Lupas algorithm is based on the structure of coiled coils from proteins that are not structurally or functionally similar to the TM proteins of viruses, antiviral peptides (e.g. DP107 and DP178) of which are an object of this invention.

[0118] The computer search strategy of the invention, as demonstrated in the Examples presented below, in Sections 9 through 16 and 19 through 25, successfully identifies regions of proteins similar to DP107 or DP178. This search strategy was designed to be used with a commercially-available sequence database package, preferably PC/Gene.

[0119] A series of search motifs, the 107x178x4, ALLMOTI5 and PLZIP motifs, were designed and engineered to range in stringency from strict to broad, as discussed in this Section and in Section 9. The sequences identified via such search motifs, such as those listed in Tables V-XIV, below, potentially exhibit antifusogenic, such as antiviral, activity, may additionally be useful in the identification of antifusogenic, such as antiviral, compounds, and are intended to be within the scope of the invention.

[0120] Coiled-coiled sequences are thought to consist of heptad amino acid repeats. For ease of description, the amino acid positions within the heptad repeats are sometimes referred to as A through G, with the first position being A, the second B, etc. The motifs used to identify DP107-like and DP178-like sequences herein are designed to specifically

search for and identify such heptad repeats. In the descriptions of each of the motifs described, below, amino acids enclosed by brackets , i.e., [], designate the only amino acid residues that are acceptable at the given position, while amino acids enclosed by braces, i.e., {}, designate the only amino acids which are unacceptable at the given heptad position. When a set of bracketed or braced amino acids is followed by a number in parentheses i.e., (), it refers to the number of subsequent amino acid positions for which the designated set of amino acids hold, e.g, a (2) means "for the next two heptad amino acid positions".

[0121] The ALLMOTIS is written as follows:

{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-

[0122] Translating this motif, it would read: "at the first (A) position of the heptad, any amino acid residue except C, D, G, H, or P is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, or P is acceptable, at the fourth heptad position (D), any amino acid residue except C, heptad position (D), any amino acid residue except C, D, G, H, or P is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, or P is acceptable. This motif is designed to search for five consecutive heptad repeats (thus the repeat of the first line five times), meaning that it searches for 35-mer sized peptides. It may also be designed to search for 28-mers, by only repeating the initial motif four times. With respect to the ALLMOTI5 motif, a 35-mer search is preferred. Those viral (non-bacteriophage) sequences identified via such an ALLMOTI5 motif are listed in Table V, below, at the end of this Section. In those instances wherein a single gene exhibits greater than one sequence recognized by the ALLMOTI5 search motif, the amino a cid residue numbers of these sequences are listed under "Area 2", Area 3", etc. This convention is used for each of the Tables listed, below, at the end of this Section.

[0123] The 107x178x4 motif is written as follows:

[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-

[0124] Translating this motif, it would read: "at the first (A) position of the heptad, only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, M or P is acceptable, at the fourth position (D), only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, M or P is acceptable. This motif is designed to search for four consecutive heptad repeats (thus the repeat of the first line four times), meaning that it searches for 28-mer sized peptides. It may also be designed to search for 35-mers, by repeating the initial motif five times. With respect to the 107x178x4 motif, a 28-mer search is preferred.

[0125] Those viral (non-bacteriophage) sequences identified via such a 107x178x4 motif are listed in Table VI, below, at the end of this Section.

[0126] The 107x178x4 search motif was also utilized to identify non-viral procaryotic protein sequences, as listed in Table VIII, below, at the end of this Section. Further, this search motif was used to reveal a number of human proteins. The results of this human protein 107x178x4 search is listed in Table IX, below, at the end of this Section.

[0127] The PLZIP series of motifs are as listed in FIG. 19. These motifs are designed to identify leucine zipper coiled-coil like heptads wherein at least one proline residue is present at some predefined distance N-terminal to the repeat. These PLZIP motifs find regions of proteins with similarities to HIV-1 DP178 generally located just N-terminal to the transmembrane anchor. These motifs may be translated according to the same convention described above. Each line depicted in FIG. 19 represents a single, complete search motif. "X" in these motifs refers to any amino acid residue. In instances wherein a motif contains two numbers within parentheses, this refers to a variable number of amino acid residues. For example, X (1,12) is translated to "the next one to twelve amino acid residues, inclusive, may be any amino acid".

[0128] Tables X through XIV, below, at the end of this Section, list sequences identified via searches conducted with such PLZIP motifs. Specifically, Table X lists viral sequences identified via PCTLZIP, P1CTLZIP and P2CTLZIP search motifs, Table XI lists viral sequences identified via P3CTLZIP, P4CTLZIP, P5CTLZIP and P6CTLZIP search motifs, Table XII lsts viral sequences identified via P7CTLZIP, P8CTLZIP and P9CTLZIP search motifs, Table XIII lists viral sequences identified via P12LZIPC searches and Table XIV lists viral sequences identified via P23TLZIPC search motifs.

[0129] The Examples presented in Sections 17, 18, 26 and 27 below, demonstrate that viral sequences identified via

the motif searches described herein identify substantial antiviral characteristics. Specifically, the Example presented in Section 17 describes peptides with anti-respiratory syncytial virus activity, the Example presented in Section 18 describes peptides with anti-parainfluenza virus activity, the Example presented in Section 26 describes peptides with anti-measles virus activity and the Example presented in Section 27 describes peptides with anti-simian immunodeficiency virus activity.

[0130] The DP107 and DP178 analogs may, further, contain any of the additional groups described for DP178, above, in Section 5.1. For example, these peptides may include any of the additional amino-terminal groups as described above for "X" groups, and may also include any of the carboxy-terminal groups as described, above, for "Z" groups.

[0131] Additionally, truncations of the identified DP107 and DP178 peptides are among the peptides of the invention. Further, such DP107 and DP178 analogs and DP107/DP178 analog truncations may exhibit one or more amino acid substitutions, insertion, and/or deletions. The DP178 analog amino acid substitutions, insertions and deletions, are as described, above, for DP178-like peptides in Section 5.1. The DP-107 analog amino acid substitutions, insertions and deletions are also as described, above, for DP107-like peptides in Section 5.2.

[0132] Tables XV through XXII, below, present representative examples of such DP107/DP178 truncations. Specifically, Table XV presents Respiratory Syncytial Virus F1 region DP107 analog carboxy truncations, Table XVI presents Respiratory Syncytial Virus F1 region DP107 analog amino truncations, Table XVII presents Respiratory Syncytial Virus F1 region DP178 analog carboxy truncations, Table XVIII presents Respiratory Syncytial Virus F1 region DP178 analog amino truncations, Table XIX presents Human Parainfluenza Virus 3 F1 region DP178 analog carboxy truncations, Table XX presents Human Parainfluenza Virus 3 F1 region DP178 analog amino truncations, Table XXI presents Human Parainfluenza Virus 3 F1 region DP107 analog carboxy truncations and Table XXII presents Human Parainfluenza Virus 3 F1 region DP107 analog amino truncations. Further, Table XXIII, below, presents DP107/DP178 analogs and analog truncations which exhibit substantial antiviral activity. These antiviral peptides are grouped according to the specific virus which they inhibit, including respiratory syncytial virus, human parainfluenza virus 3, simian immunodeficiency virus and measles virus.

TABLE V

ALLMOTI5 SEARCH RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

FCGENE	ALIAS	All Viruses (as bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
ULLNAME	PROTEIN	VIRUS							
P1MK_TVP3	POTENTIAL 170 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	113-153						
P194K_TVP3Y	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM	144-178	214-255	391-446	644-678	1045-1079	1135-1176	1135-1176
P35KD_HSV6U	35 K D PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	228-262						
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	3-48	100-144					
PAANT_HDVDJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE D380)	3-48	100-144					
PAANT_HDVIT	DELTA ANTIGEN (ALPHA ANTIGEN)	HEPATITIS DELTA VIRUS (ISOLATE ITALIAN)	3-48	100-144					
PAANT_HDVL1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE LEBANON-1)	3-48						
PAANT_HDVN1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE N-1)	3-48	100-144					
PAANT_HDVN2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE N-2)	3-48	100-144					
PAANT_HDVNA	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE NAURU)	3-48	100-144					
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-1)	1-49	100-144					
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-2)	1-49	100-144					
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE WOODCHUCK)	3-48	100-144					
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438)	71-110						
PATII_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	14-57	420-564	570-623				
PATII_VARV	81 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	423-523	531-565	571-628				
PATII_HSV11	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	304-345						
PATII_HSV1F	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	102-139	304-345					
PATII_HSVEB	ALPHA TRANS-INDUCING FACTOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-147	268-311					
PATII_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	79-124	219-263					
PATII_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	79-124						
PATI2_VZVD	ALPHA TRANS-INDUCING FACTOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	298-361	393-429					
PATIJ_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	51-95						
PATIN_HSV2J	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	178-219	324-381					
PATIN_HSV2H	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	177-222	324-381					
PATIN_HSVBP	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1	195-236						
PATIN_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1	241-289						
PATIN_VZVD	ALPHA TRANS-INDUCING PROTEIN (	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	206-252						
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-57	420-526	532-566	572-629	803-959	1106-1150	
PBDL3_EBV	PROTEIN BDLF2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-131						
PBRL1_EBV	TRANSCRIPTION ACTIVATOR BRLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-187						
PCOA1_POVBA	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141						
PCOA1_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141						
PCOA1_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	159-195						
PCOA1_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	109-143						
PCOA2_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	141-211						
PCOA2_POVBA	COAT PROTEIN VP2	POLYOMAVIRUS BK (STRAIN AS)	14-64	117-151					
PCOA2_POVBK	COAT PROTEIN VP2	POLYOMAVIRUS BK	14-64	117-151					
PCOA2_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	25-78	153-216					
PCOA2_POVHA	COAT PROTEIN VP2	HAMSTER POLYOMAVIRUS	7-48	174-208					
PCOA2_POVIC	COAT PROTEIN VP2	POLYOMAVIRUS JC	14-64	223-267					
PCOA2_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	14-78	156-206					
PCOA2_POVMJ	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN 1)	5-72	137-183					
PCOA2_POVMA	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-183					
PCOA2_POVMC	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-183					
PCOA2_POVMK	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	15-58	177-211					
PCOA2_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	14-62	228-262	318-352				
PCOAT_ABMVW	COAT PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA	180-214						
PCOAT_ACLSV	COAT PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	134-188						
PCOAT_AEDEV	COAT PROTEIN VP1	AEDES DENSONUCLEOSIS VIRUS	243-284						
PCOAT_AMCV	COAT PROTEIN	ARTICHOKE MOTTLED CRINKLE VIRUS	36-70	100-134					
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	89-123						

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2	AREA 2
FILENAME	PROTEIN	VIRUS								
PCOAT_BMV	COAT PROTEIN	BROME MOSAIC VIRUS	38-93							
PCOAT_BYDV1	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVM	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVP	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_BYDVR	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN	56-90	186-233						
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	186-233						
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	185-232						
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	13-51							
PCOAT_CCMV	COAT PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	141-178							
PCOAT_CERV	PROBABLE COAT PROTEIN	CARNATION ETCHED RING VIRUS	192-226							
PCOAT_CHYP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	393-433							
PCOAT_CLVK	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CMVFC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	133-187							
PCOAT_CMVI	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	133-187							
PCOAT_CMVP6	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	133-187							
PCOAT_CMVQ	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	133-187							
PCOAT_CMVWL	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	133-187							
PCOAT_CNVY	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	133-187							
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	128-365							
PCOAT_CSMV	COAT PROTEIN	CHLORUS STRIATE MOSAIC VIRUS	184-218							
PCOAT_CTV26	COAT PROTEIN	CITRUS TRISTEZA VIRUS	79-120							
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	182-204							
PCOAT_EPMV	COAT PROTEIN	EGGPLANT MOSAIC VIRUS	40-74							
PCOAT_FCVC6	COAT PROTEIN	FELINE CALICIVIRUS	433-466	566-600						
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS	502-550	566-600						
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS	519-553	569-603						
PCOAT_FMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS	144-199	206-247	449-483					
PCOAT_FOMV	COAT PROTEIN	FOXTAIL MOSAIC VIRUS	168-220							
PCOAT_IRV1	CAPSID PROTEIN	TIPULA IRIDESCENT VIRUS	90-124							
PCOAT_IRV12	CAPSID PROTEIN	STAPHYLINUS IRIDESCENT VIRUS	90-124							
PCOAT_IRV6	CAPSID PROTEIN	CHILO IRIDESCENT VIRUS	51-85							
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	22-70	233-289						
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	7-76	84-121						
PCOAT_MSVK	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVN	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVS	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	105-139							
PCOAT_PAVBO	COAT PROTEIN VP2	BOVINE PARVOVIRUS	380-414	444-480						
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS	497-531							
PCOAT_PEBV	COAT PROTEIN	PEA EARLY BROWNING VIRUS	73-114							
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS	36-81							
PCOAT_PPMV3	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS	104-138							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS	38-72	231-292						
PCOAT_PYMVV	COAT PROTEIN	POTATO YELLOW MOSAIC VIRUS	190-224							
PCOAT_RBDV	COAT PROTEIN	RASPBERRY BUSHY DWARF VIRUS	10-44	140-199						
PCOAT_RCNMV	COAT PROTEIN	RED CLOVER NECROTIC MOSAIC VIRUS	272-306							
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	34-68	83-120	259-309					
PCOAT_SLCV	COAT PROTEIN	SQUASH LEAF CURL VIRUS	190-224							

PCGENE	ALLAOTH	All Viruses (no bacteriophage)						
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PCOAT_SMVLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	66-100							
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-166							
PCOAT_STNV1	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 1	2-50							
PCOAT_STNV2	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 2	38-72							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	7-55							
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	14-48							
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	1-37	43-77						
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	44-78	100-134						
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	12-46							
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	186-220							
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	101-137							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	76-138							
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	101-137							
PCOAT_TRVCA	COAT PROTEIN	TOBACCO RATTLE VIRUS	71-109							
PCOAT_TRVTC	COAT PROTEIN	TOBACCO RATTLE VIRUS	69-103							
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS	2-36							
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_WCMVO	COAT PROTEIN	WHITE CLOVER MOSAIC VIRUS	163-197							
PCORA_HPBG5	CORE ANTIGEN	GROUND SQUIRREL HEPATITIS VIRUS	94-135							
PCORA_HPBV9	CORE ANTIGEN	HEPATITIS B VIRUS	111-149							
PCORA_WHV1	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 1	62-106							
PCORA_WHV8	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 8	62-106							
PD230_ASFB7	PROTEIN D230R	AFRICAN SWINE FEVER VIRUS	198-232							
PDNB1_ADE05	EARLY E1A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 5	291-336							
PDNB1_ADE05	EARLY E1A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 5	291-336							
PDNB1_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS	215-252	716-752	924-1099	1027-1068				
PDNB1_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS	318-372	1013-1078						
PDNB1_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	357-393	599-640	769-803	1079-1140				
PDNB1_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	357-393	599-640	769-803	1079-1140				
PDNB1_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	357-393	599-640	769-803	1079-1140				
PDNB1_HSVB2	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2	352-391	599-633	1048-1111					
PDNB1_HSVE1	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	273-314							
PDNB1_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	617-658	1107-1148						
PDNB1_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI	222-259	516-567	906-957	873-907				
PDNB1_MCMV5	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS	384-418	987-1125						
PDNB1_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS	325-362							
PDNB1_VZVO	MAJOR DNA-BINDING PROTEIN	VARICELLA-ZOSTER VIRUS	613-650	1041-1077						
PDNL1_ASFM2	DNA LIGASE	AFRICAN SWINE FEVER VIRUS	72-106							
PDNL1_VACCC	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNL1_VACCV	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNL1_VARV	DNA LIGASE	VARIOLA VIRUS	395-436							
PDPOL_ADE02	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	667-743							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	667-743							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	733-809							

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
CHECKNAME	PROTEIN	VIRUS								
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	665-741							
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	23-64	202-240						
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	241-284							
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	247-284							
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	80-114	371-412					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	733-787	1033-1074						
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	5-39							
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39							
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE 53)	5-39	207-238						
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS		291-323						
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39	224-265	353-395					
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	201-235							
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	511-559							
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI	511-559							
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	511-559							
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	511-559							
PDPOL_HSV21	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	512-560							
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	494-528							
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)	33-67	128-166	401-435	706-749	808-858			
PDPOL_HPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	593-646							
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	637-683	770-818	828-862					
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	637-683	770-818	828-862					
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	626-682	769-817	827-861					
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	433-533							
PDPOL_VHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326							
PDPOL_VHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331							
PDPOL_VHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	290-331							
PDPOL_VHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	289-330							
PDPOL_VHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	290-331							
PDPOM_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDUT_HSVEB	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P	135-169							
PDUT_HSVSA	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	HERPESVIRUS SAIMIRI (STRAIN 11)	179-223							
PE1A_ADE41	EARLY E1A 37 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	103-141							
PE1BL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	102-166							
PE1BS_ADE02	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 2	101-137							
PE1BS_ADE05	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 5	101-137							
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	98-131							
PE1BS_ADE40	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	100-134							
PE1BS_ADE41	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 41	100-134							
PE1BS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	119-173							
PE1E_ADE02	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	2-39							
PE1E_ADE03	EARLY E1 15.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	8-49							
PE1E_ADE05	EARLY E1 14.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	2-39							
PE1E_ADE07	EARLY E1 15.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	7-48							
PE1G_ADE35	EARLY E1 20.3 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	70-107							
PE1I_ADE35	EARLY E1 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	125-169							
PE4II_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	10-44							
PE4II_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	10-44							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	123-157							
PEBN4_EBV	EBNA-4 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	487-521							
PEFT1_VAVV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	23-71	307-341						

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)						
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-373					
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-378					
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	420-432					
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	428-478					
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	390-436					
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	10-44	88-122	221-255	530-610	635-691	
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	10-44	88-122	559-593	550-284	559-639	664-724
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-379					
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-379					
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDN)	304-379					
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIAN ISOLATE LB285)	304-379					
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIAN ISOLATE LB59)	304-379					
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE NIJ-1)	304-379					
PENV_CAEVC	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	137-196	615-720	731-785	847-895		
PENV_CAEVG	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	134-193	611-718	749-783	845-893		
PENV_EIAV1	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-1)	39-76	426-523	559-593	668-716		
PENV_EIAV2	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-2)	39-76	426-523	559-593	658-692		
PENV_EIAV5	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-5)	39-76	426-523	559-593	658-716		
PENV_EIAV9	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	39-76	426-523	559-593	659-693		
PENV_EIAVC	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	39-76	426-523	559-593	658-716		
PENV_EIAVW	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	39-76	426-523	559-593	658-716		
PENV_EIAVY	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	39-76	426-523	559-593	658-716		
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	303-353	587-604				
PENV_FIVPE	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	610-690	715-756				
PENV_FIVSD	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	601-688	713-754				
PENV_FIVT2	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	60-122	609-689	714-755			
PENV_FLVC6	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	497-549	561-593				
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN GLASGOW-1)	478-530	542-576				
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	498-550	562-596				
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	475-527	539-573				
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	1-41	154-205	321-355	563-693	866-903	
PENV_FSVDA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	478-530	562-596				
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	478-530	542-576				
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	481-524	545-579				
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	498-552					
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	523-575	587-621				
PENV_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	321-383					
PENV_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	318-383					
PENV_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	321-383					
PENV_HTLV2	ENV POLYPROTEIN PRECURSOR	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	317-377					
PENV_HV1A3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	497-593	612-711	766-845			
PENV_HV1B1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	505-594	610-712	767-845			
PENV_HV1B8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH8 ISOLATE)	508-589	605-707	762-838			
PENV_HV1BN	ENVELOPE POLYPROTEIN GP160 PRECURSOR (CONT	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRAIN ISOLATE)	331-365	501-590	609-708	763-831		
PENV_HV1BR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	510-599	613-717	772-841			
PENV_HV1C4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	341-376	510-606	626-724	779-835		
PENV_HV1EL	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	235-296	502-591	607-709	768-829		
PENV_HV1H3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB3 ISOLATE)	505-594	610-712	767-836			
PENV_HV1HJ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HJXB) ISOLATE)	505-594	610-712	767-843			
PENV_HV1J1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HJ1 ISOLATE)	343-377	511-605	622-723	778-843		
PENV_HV1JR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RCSF ISOLATE)	339-363	497-586	603-704	759-835		

PCGENE	ALLNOTES	All Viruses (no bacteriophages)							
FILE_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8
PENV_HV1KB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	88-122	338-372	511-545	535-599	618-677	681-718	772-848	
PENV_HV1NA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NAL ISOLATE)	239-300	307-396	617-714	770-833				
PENV_HV1MF	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	303-392	622-710	765-841					
PENV_HV1MN	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	336-370	506-595	617-713	774-841				
PENV_HV1N5	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	328-360							
PENV_HV1ND	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	493-584	601-702	757-823				
PENV_HV1OY	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	336-370	497-593	610-711	766-842				
PENV_HV1PV	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	305-394	610-712	767-843					
PENV_HV1RH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	344-378	507-603	619-721	776-852				
PENV_HV1S1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	406-585	602-703	758-830					
PENV_HV1S3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	332-366	494-590	607-708	763-837				
PENV_HV1SC	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	331-365	498-594	611-712	767-834				
PENV_HV1W1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	331-365	498-594	611-712	767-836				
PENV_HV1W2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	327-361	489-584	602-703	758-827				
PENV_HV1Z2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	335-396	502-591	610-709	764-831				
PENV_HV1Z3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	231-292							
PENV_HV1Z6	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	336-397	504-593	609-711	766-840				
PENV_HV1Z8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	366-307	512-601	617-675	682-719	774-831			
PENV_HV2H	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOL	322-394	612-671	675-712	777-839				
PENV_HV2BE	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	447-481	510-595	617-680					
PENV_HV2CA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	513-597	619-709						
PENV_HV2D1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	501-586	608-698						
PENV_HV2G1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	439-473	502-587	609-699					
PENV_HV2NZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	488-587	609-699						
PENV_HV2RO	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	511-596	618-708						
PENV_HV2S2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24.1C#	442-476	505-590	612-702					
PENV_HV2SB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	326-388	614-700						
PENV_HV2ST	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	505-590	612-702					
PENV_DMAE	ENV POLYPROTEIN PRECURSOR	MOUSE INTRACISTERNAL A-PARTICLE	367-422	465-527						
PENV_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	401-455	571-603						
PENV_MCFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-523	317-571						
PENV_MCFFJ	ENV POLYPROTEIN PRECURSOR (COAT POLYPROTE	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLA	474-526	538-572						
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	503-555	567-601						
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	498-550	562-596						
PENV_MLVF3	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	520-564	576-610						
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD29)	520-564	576-610						
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-211)	520-564	576-610						
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOMULV MURINE LEUKEMIA VIRUS	504-551	563-597						
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-92	104-138						
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	502-554	566-600						
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	497-549	561-593						
PENV_MLVSK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-549	561-593						
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN DR4)	477-539	536-612						
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	477-539	536-612						
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	408-474							
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	43-95	107-141						
PENV_OMVV3	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	23-64	185-223	664-746	780-816				
PENV_RMCFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	484-538	540-574						
PENV_RSFFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER SPLEEN FOCUS-FORMING VIRUS	342-376							
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	1-41	101-140	154-205	321-355	560-651	658-693	1066-994	
PENV_SFV3L	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	1-46	138-209	319-357	560-706	863-901			
PENV_SIVAI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	269-310	551-623	643-693					

FCGENE	ALIAS01S	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8
FILE NAME	PROTEIN	VIRUS								
PENV_SIVAG	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	356-638	651-699	808-852					
PENV_SIVAJ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GR	357-391	736-770	535-607	617-684	791-840			
PENV_SIVAT	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	364-398	549-621	644-693	706-833				
PENV_SIVCZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ)	353-391	730-765	512-584	669-701	803-837			
PENV_SIVGB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	366-634	677-725						
PENV_SIVM1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	114-151	465-506	528-611	633-725	809-864			
PENV_SIVM3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	11-109	161-219	345-386					
PENV_SIVMK	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MAY ISOLATE)	464-505	549-612	618-724					
PENV_SIVML	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	464-503	540-612	618-724					
PENV_SIVS4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (FZ18S4114 ISOLATE)	466-509	517-616	618-728	812-853				
PENV_SIVSP	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ6DC1) ISOLATE)	470-513	531-630	642-732	811-848				
PENV_SMRVH	ENV POLYPROTEIN PRECURSOR	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	409-466							
PENV_SRV1	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	409-475							
PENV_VILV	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514)	21-62	184-222	637-740	773-809				
PENV_VILV1	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	21-62	184-222	643-746	780-816				
PENV_VILV2	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	21-62	184-222	645-748	782-818				
PERBA_AVIER	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	106-140							
PETF1_FOWP1	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	190-224	333-387						
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	37-71	267-340	350-387					
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-71	307-341						
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	23-71	307-341						
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	32-97	174-208						
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	32-97	174-208						
PEXON_HCMVA	ALKALINE EXONUCLEASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-114							
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-141							
PEXON_PRVNI	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	82-120							
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-157	342-383						
PFIB2_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	182-237							
PFIB2_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	182-222							
PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	156-194							
PFIBP_ADE07	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 7	176-210							
PFIBP_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-332							
PFIBP_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	320-366							
PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	181-215	383-426						
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	171-169							
PFOS_AVINK	P55-V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24	109-152							
PFOS_MSVFB	P55-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	155-193							
PGAGC_AVISC	P47(GAG-CRK) PROTEIN	AVIAN SARCOMA VIRUS (STRAIN CT10)	57-101							
PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	57-94							
PGAG_AVEV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	6-43							
PGAG_AVMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	57-94							
PGAG_AVMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1BI	57-94							
PGAG_AVISU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	57-94							
PGAG_AVISY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	57-94							
PGAG_BIV06	GAG POLYPROTEIN (P33)	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	1-41							
PGAG_EIAVY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	61-118							
PGAG_FIVPE	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	76-110							
PGAG_FIVSD	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	76-110							
PGAG_FIVT2	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	76-110							
PGAG_FLV	GAG POLYPROTEIN	FELINE LEUKEMIA VIRUS	496-537							
PGAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	130-186	391-425	439-480	607-655				
PGAG_FSVMD	GAG POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	498-534							

PCGENE	ALLMOTIF	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PGAG_FUSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	57-94							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	393-444							
PGAG_HVIA2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	87-133	294-328						
PGAG_HVIB1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	90-131	292-326						
PGAG_HVIB5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	90-131	292-326						
PGAG_HVIBR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	90-131	292-326						
PGAG_HVIC4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	90-131	292-326						
PGAG_HVIEL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	93-131	292-326						
PGAG_HVIH2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	90-131	292-326						
PGAG_HVIJ3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	87-131	292-326						
PGAG_HVIJR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	87-131	292-326						
PGAG_HVIMA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	90-137							
PGAG_HVIMN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	87-134	295-329						
PGAG_HVIN5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	90-131	292-326						
PGAG_HVIND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	87-128	289-323						
PGAG_HVIOY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	90-131	292-326						
PGAG_HVIPV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	90-131	292-326						
PGAG_HVIRH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	90-131	292-326						
PGAG_HVIU4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	87-127							
PGAG_HVIW2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	292-326							
PGAG_HVIZ2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	87-132	293-327						
PGAG_HV2SB	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY)	292-326							
PGAG_DHA	RETROVIRUS-RELATED GAG POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	93-127	330-357						
PGAG_DMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	67-103							
PGAG_DMAE	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	89-133	138-172						
PGAG_JSRV	GAG POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	470-504							
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	83-131	136-190						
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	83-131	136-190						
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	221-260							
PGAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	53-94							
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A (SCV-L-A)	102-139	490-531						
PGAG_SFVI	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	120-177	378-416	583-634					
PGAG_SFVL	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	171-407	435-522	591-632					
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	302-336							
PGAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	306-340							
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	183-217	473-507						
PGAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	302-336							
PGAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	301-335							
PGAG_SIVGB	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	163-204	223-267	281-317					
PGAG_SIVSAV	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	394-431							
PHEL1_HSV11	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	172-206	769-820						
PHEL1_HSV2H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	468-503	670-721						
PHEL1_HSV3A	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	158-201	413-449	599-633					
PHEL1_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	445-517	782-821						
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	208-242							
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-242							
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-242							
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	208-242							
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	208-242							
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AICHI/2/68)	380-436							
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN ABANGKOK/1/79)	384-440							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN ABUDGENGAB/HOKKAIDO/1/77)	378-434							

PCGENE	ALLNOTS	All Viruses (no bacteriophage)						
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	378-454					
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	106-147	175-475	494-528			
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	360-453	487-532				
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/	360-453	487-532				
PHEMA_IACK3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	377-469	504-549				
PIHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	112-146	377-469				
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	378-454					
PHEMA_IADA2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	377-476	495-547				
PHEMA_IADAJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	380-453					
PHEMA_IADA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	379-478	506-548				
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-454					
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-53	377-472				
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/77)	364-440					
PHEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/80)	364-440					
PHEMA_IADHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	364-440					
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	364-440					
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	364-440					
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/83)	364-440					
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/83)	364-440					
PHEMA_IADIR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/83)	379-471	506-551				
PHEMA_IADM1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76	21-53					
PHEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	380-456					
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-53					
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-454					
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	21-53					
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	380-456					
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77)	380-456					
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	377-477					
PHEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-454					
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-473					
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/3/78)	377-476					
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	379-455					
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAR/BRIDGE/1/63)	112-146	360-484	503-537			
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAR/BRIDGE/1/73)	112-146	360-484	503-537			
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C.DETROIT/1/64)	360-484	503-537				
PHEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	360-484	503-537				
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	379-455					
PHEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/5/86)	379-455					
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	379-455					
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	112-146	360-484	503-537			
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	112-146	360-484	503-537			
PHEMA_IAHMI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63	379-455					
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/77/6)	379-455					
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	112-146	360-484	503-537			
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	112-146	360-484	503-537			
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/20)	379-455					
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	379-455					
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	112-146	360-484	503-537			
PHEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/73/72)	112-146	360-484	503-537			
PHEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	379-455					
PHEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	379-455					
PHEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/61)	379-455					

PCGENE	ALLMOTIF	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
ENAME	PROTEIN	VIRUS							
PHEMA_IAIAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57	373-467	503-547					
PHEMA_IAIAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	376-478	506-548					
PHEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	376-478	506-548					
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	376-478	506-548					
PHEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	377-453						
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	382-458						
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	380-456						
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	380-456						
PHEMA_IAME3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	380-456						
PHEMA_IAME5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/5/86)	364-440						
PHEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	108-142	375-475					
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	380-456						
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/ANIING/328/84)	378-477	496-534					
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	376-478	506-548					
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/	378-454						
PHEMA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	378-454						
PHEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	379-474	506-532					
PHEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/513/86)	112-146	377-469					
PHEMA_IATK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/81).	379-471	506-531					
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	378-454						
PHEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	392-470	504-548					
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	378-454	491-540					
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	30-64	373-474					
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	373-472	487-539					
PHEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	21-55						
PHEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	381-456						
PHEMA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77	376-478	506-548					
PHEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	381-457						
PHEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	373-477	503-547					
PHEMA_IAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	380-456						
PHEMA_IAZH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	364-440						
PHEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/125/82)	364-440						
PHEMA_IAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	379-478	506-548					
PHEMA_IAZNJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	379-478	506-547					
PHEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKRELI/84	380-456						
PHEMA_IVBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BELJING/1/87	388-473						
PHEMA_IVBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/DONN/43)	378-463						
PHEMA_IVBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	386-471						
PHEMA_IVBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	381-463						
PHEMA_IVBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	387-472						
PHEMA_IVBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	377-462						
PHEMA_IVBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	381-468						
PHEMA_IVBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	386-471						
PHEMA_IVBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	386-471						
PHEMA_IVBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	379-464						
PHEMA_IVBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	381-466						
PHEMA_IVBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	388-473						
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	483-571						
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	471-559						
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	471-559						
PHEMA_INCHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/81)	470-558						
PHEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	484-572						
PHEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/82)	470-558						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)						
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PHEMA_INCM1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN MISSISSIPPI/80)	470-558					
PHEMA_INCM2	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN ONARA/82)	470-558					
PHEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/TG/DEI/ING/10/81)	471-559					
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TG/DEI/ING/11/81)	471-559					
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TG/DEI/ING/409/82)	471-559					
PHEMA_INCP3	MEASLES VIRUS (STRAIN HALLE)	INFLUENZA C VIRUS (STRAIN C/TAYLOR/123)/47	471-559					
PHEMA_INCTA	(HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	471-559					
PHEMA_INCYA	(HEMAGGLUTININ PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)	46-90					
PHEMA_MEASE	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN HALLE)	46-90					
PHEMA_MEASH	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN IP-3-CA)	46-87					
PHEMA_MEASI	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN YAMAGATA-1)	46-87					
PHEMA_MEASY	(HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1	34-99					
PHEMA_MUMP1	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	34-99					
PHEMA_MUMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	34-99					
PHEMA_MUMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	34-99					
PHEMA_MUMPS	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	8-52	477-539				
PHEMA_NDVA	(HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	1-49					
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	1-52					
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	1-53					
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	1-52					
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B./48)	1-49					
PHEMA_NDVTG	(HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	1-52					
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-93					
PHEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	66-110					
PHEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS	247-281					
PHEMA_PIIH	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	247-281					
PHEMA_PIIHT	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	38-93					
PHEMA_PIIB	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	13-110	394-428				
PHEMA_PIIH4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/12485/74)	20-110	394-428				
PHEMA_PIIHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/3945/80)	13-110	394-428				
PHEMA_PIIHT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	13-110	394-428				
PHEMA_PIIHU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/83)	13-110	394-428				
PHEMA_PIIHV	(HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	13-110	394-428				
PHEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/77))	13-110	394-428				
PHEMA_PIIHX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	34-88					
PHEMA_PI4HA	HEMAGGLUTININ-NEURAMINIDASE	RACCOON POXVIRUS	166-214	236-290				
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	46-87					
PHEMA_RINDX	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	46-87	191-225				
PHEMA_RINDL	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	57-110					
PHEMA_SEND3	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	57-110					
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	57-110					
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	57-110					
PHEMA_SEND1	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	57-110					
PHEMA_SEND2	(HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS 41	18-52	387-421				
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN W3)	27-82					
PHEMA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE HUMAN/LN)	27-82					
PHEMA_SV5LN	(HEMAGGLUTININ-NEURAMINIDASE	VARIOLA VIRUS	177-211					
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	HUMAN ADENOVIRUS TYPE 2	90-134					
PHEX0_ADE02	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	90-134					
PHEX0_ADE05	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	85-134					
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-134					
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7, AND HUMAN ADENOVIRUS TYPE	93-138					

PC/GENE	ALLMOTIFS	All Viruses (no bacteriophages)							
ID/ NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEX9_ADE12	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 12	88-137							
PHEX9_ADE41	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 41	67-126							
PHEX9_ADEC2	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	53-103							
PHEX9_ADEC3	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	61-109							
PHEX9_ADENT	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	341-386	433-467	583-624					
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	330-379							
PHEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352	408-449	553-587					
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 41	306-355	355-389						
PHEX_ADE41	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 3	301-346	385-419	544-578	705-739				
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	320-393	453-489						
PHRO_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	110-151							
P1216_ASFB7	LATE PROTEIN 1216R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	3-44	378-419						
PIBI4P_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	339-420							
PIBI4P_CAMVB	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DARI 1)	3-37	378-419						
PIBI4P_CAMVC	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	3-44	378-419						
PIBI4P_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	3-37	378-419						
PIBI4P_CAMVE	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DIC)	3-37	378-419						
PIBI4P_CAMVJ	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN S-JAPAN)	3-37	378-419						
PIBI4P_CAMVN	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	3-37	378-419						
PIBI4P_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	3-37	378-419						
PIBI4P_CAMVS	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	3-37	378-419						
PIBI4P_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	3-37							
PIBI4P_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	1-51	272-406						
PIBI4P_SCMV	INCLUSION BODY MATRIX PROTEIN		1-48	132-179						
PIC1I_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	53-98	290-324	498-532					
PIC1I_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	331-365							
PIC1I_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	331-365							
PIC1I_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	324-362							
PIC1I_HSVB2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BA/V)	466-500							
PIC1I_HSVEB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS TYPE 1 (ISOLATE HVS33A)	341-375							
PIC1I_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	58-99	361-395						
PIC1I_MCMVS	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	60-112	290-340	647-691					
PIC1I_PAVIF	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	299-333	303-337						
PICP0_HSVBJ	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN JURA)	190-224							
PICP0_HSVBK	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN K22)	190-224							
PICP4_HSVMG	TRANS-ACTING TRANSCRIPTIONAL ACTIVATOR PR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	1022-1056							
PICP4_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	920-954							
PIE63_HCMVA	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	207-241							
PIE63_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	241-275							
PIE63_HSVEB	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	282-316							
PIE63_VZVD	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	195-229	258-306						
PIE68_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	87-121							
PIE68_HSVEB	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	99-133							
PIE6B_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	48-85							
PIR03_HCMVA	HYPOTHETICAL PROTEIN IRL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13-47							
PIR12_HCMVA	HYPOTHETICAL PROTEIN IRL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-102							
PKABL_FSVHY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 2)	280-314							
PKABL_MLVAB	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	ABELSON MURINE LEUKEMIA VIRUS	217-251							
PKAKT_MLVAT	AKT KINASE TRANSFORMING PROTEIN	AKT8 MURINE LEUKEMIA VIRUS	172-227	265-304						
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	23-64	104-138						
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	218-252							
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	313-362	638-679	812-849					
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRC11)	65-99							

PCGENE	ALLNOTIS	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS								
PKFP3_FUSV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	65-99	152-251	348-398					
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	47-81							
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1	38-82							
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	228-262	431-472						
PKITH_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	90-124							
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	90-124							
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	90-124							
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	90-124							
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	90-124							
PKITH_HSV2J	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	91-125							
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 1 (STRAIN WC11)	616-665							
PKITH_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	19-53	178-219						
PKITH_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	19-53	178-230						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	180-214							
PKITH_HSVMR	THYMIDINE KINASE	MARMOSET HERPESVIRUS	52-86							
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	137-189							
PKITH_PRVN3	THYMIDINE KINASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	161-202							
PKNIL_AVIMH	NIL SERINE/THREONINE-PROTEIN KINASE TRANSF	AVIAN RETROVIRUS MH2	69-103							
PKR15_HSV11	GENE 15 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	190-224							
PKRJ_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	37-91	281-315						
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	487-528	597-631						
PKRAF_MSV16	RAF SERINE/THREONINE-PROTEIN KINASE TRANSF	MURINE SARCOMA VIRUS 3611	11-45							
PKRB1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	137-168							
PKRB1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	127-168							
PKRB1_VARV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	123-171							
PKRB2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-181							
PKRB2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-181							
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	169-203							
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	136-170							
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	169-203							
PKROS_AVISU	ROS TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN URJ)	111-145							
PKRYK_AVIRJ	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN RETROVIRUS RPL30	15-66							
PKTHY_VACCV	THYMIDYLATE KINASE	VACCINIA VIRUS (STRAIN WR). (STRAIN COPENHAGEN)	133-169							
PKYES_AVISY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN Y73)	174-233							
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	441-475							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	223-264							
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-232	408-442						
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	199-233							
PL33_ADE02	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	238-284	301-349						
PL33_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	238-284	301-349						
PLMP1_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	144-179	294-338						
PMCEL_SFVKA	MRNA CAPPING ENZYME	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-133	622-656						
PMCEL_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41	623-657						
PMCEL_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	1-41	623-657						
PMCEL_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	1-39	623-657						
PMCES_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-137	245-286						
PMCES_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	72-137	245-286						
PMCES_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	72-137	245-286						
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	116-157	279-313	738-772					
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	26-66							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	29-66							

ICGENE	ALLNOTES	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA2	AREA2	AREA2	AREA3
FILENAME	PROTEIN	VIRUS							
PMOVP_TMVTO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO L)	33-46						
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LIA)	33-80						
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LII)	33-80						
PMTC1_CHVNI	MODIFICATION METHYLASE CVBI	CHLORELLA VIRUS NC-1A	332-356						
PMTC1_CHVPI	MODIFICATION METHYLASE CVAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	116-164						
PMYC_AVDMJ	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	279-286	375-419					
PMYC_AVMC	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	330-367	376-420					
PMYC_AVMD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 10I	330-367	376-420					
PMYC_AVOAE	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	331-431						
PMYC_AVOK	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	324-361	370-414					
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-437						
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-437						
PNCA3_CVMA5	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	12-46						
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	122-211						
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	46-83	122-156					
PNCAP_BRSVA	NUCLEOCAPSID PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	62-108	161-200	248-303	343-383			
PNCAP_BUNGE	NUCLEOCAPSID PROTEIN	BUNYAVIRUS GERMISTON	176-218						
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	176-229						
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	176-229						
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	175-228						
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C680)	223-266	427-461					
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	133-174	179-217	334-403				
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653114)	40-84	321-369					
PNCAP_CVBF	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN F15)	349-383						
PNCAP_CVBM	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	349-383						
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	165-227						
PNCAP_CVHOC	NUCLEOCAPSID PROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	349-383						
PNCAP_CVMJH	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	12-46						
PNCAP_CVPFS	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	149-206						
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	165-227						
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRIT	149-218						
PNCAP_CVPRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	149-218						
PNCAP_CVRSD	NUCLEOCAPSID PROTEIN	RAT CORONAVIRUS (STRAIN 681)	12-46						
PNCAP_CVTKE	NUCLEOCAPSID PROTEIN	TURKEY ENTERIC CORONAVIRUS	349-383						
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	230-306						
PNCAP_FPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	151-206						
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	1-35	40-74	333-381				
PNCAP_HAZVJ	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC310)	222-297						
PNCAP_HRSV1	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	62-145	161-200	248-303	343-380			
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	62-145	161-200	248-303	343-380			
PNCAP_IBVG	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN GRAY)	186-227						
PNCAP_IBVK	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	186-220						
PNCAP_TUNV	NUCLEOCAPSID PROTEIN	TUNIN ARENAVIRUS	96-131						
PNCAP_LASSO	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	65-111	113-174					
PNCAP_LASSU	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	65-113	122-174	467-504				
PNCAP_LDV	NUCLEOCAPSID PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	1-40						
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	45-117	460-497					
PNCAP_LYCVW	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	45-79	83-117	460-497				
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	175-235						
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	188-226	363-411					
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	188-226	363-411					
PNCAP_MEASI	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN IP-J-CA)	188-226	363-411					

PGENE	ALLNOTES	All Viruses (no bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	OTHER
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	188-226	369-411					
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	63-106	471-503					
PNCAP_MUMPI	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	214-255	500-534					
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-255						
PNCAP_PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	1-35	46-74	333-392				
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	212-272	441-510					
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	212-272	441-510					
PNCAP_PIIHT	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	214-266	344-378					
PNCAP_PIIB	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	200-403	446-496					
PNCAP_PIIH3	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	87-135	208-266	344-403	460-491			
PNCAP_PIHA	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	58-94	191-267					
PNCAP_PIHB	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 61-333)	58-94	191-267					
PNCAP_PIARV	NUCLEOCAPSID PROTEIN	PICHINDE ARENAVIRUS	63-112						
PNCAP_PIRYV	NUCLEOCAPSID PROTEIN	PIRY VIRUS	21-116	325-359					
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	1-35	46-75	333-392				
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	1-35	46-75	333-385				
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-141	248-301	344-388				
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	333-387						
PNCAP_SENDS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	212-272	343-404					
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	212-272	343-404					
PNCAP_SEND2	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN 2)	212-272	343-408					
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	1-35	46-74	333-381				
PNCAP_SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	213-267	372-406	418-466				
PNCAP_SYNV	NUCLEOCAPSID PROTEIN	SONCHUS YELLOW NET VIRUS	333-386						
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACAIBE VIRUS	80-84	230-264					
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	215-249						
PNCAP_TSWVB	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIIIBR	79-120						
PNCAP_TSWVH	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (HAWAIIAN ISOLATE)	79-120						
PNCAP_TSWVL	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L)	79-120						
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	51-102						
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	249-335						
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARAH)	142-180	249-335					
PNCAP_VSVIC	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	42-108						
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	67-115						
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	42-115						
PNEF_HV2BE	NEGATIVE FACTOR	HUMAN DARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	1-48						
PNEF_HV2D1	NEGATIVE FACTOR	HUMAN DARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	1-48						
PNEF_HV2RO	NEGATIVE FACTOR	HUMAN DARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	112-160						
PNEF_HV2SB	NEGATIVE FACTOR	HUMAN DARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY)	109-150						
PNEF_HV2ST	NEGATIVE FACTOR	HUMAN DARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	108-149						
PNEF_SIVAI	NEGATIVE FACTOR	SIMIAN DARUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	96-140						
PNEF_SIVS4	NEGATIVE FACTOR	SIMIAN DARUNODEFICIENCY VIRUS (F236SMH4 ISOLATE)	9-43	233-267					
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/7027/7	47-81						
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	33-74						
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/83)	50-91						
PNRAM_IACKQ	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370	349-383						
PNRAM_IACKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/8125/	349-383						
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	14-48						
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	14-48	194-239					
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/CORI/56)	10-47	193-233					
PNRAM_IAHKI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-44	361-402					
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	50-91						

GENE FILE NAME	ALLMOTIS PROTEIN	All Viruses (no bacteriophage) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	50-91							
PNRAM_IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H3N2)/BELLA/1/42)	50-88							
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/	49-91							
PNRAM_IASH2	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	10-44							
PNRAM_IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	7-41							
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/C75)	49-81							
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-91							
PNRAM_IAWBM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/1/84)	49-91							
PNRAM_INBDE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	5-46	348-382						
PNRAM_INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	5-46	349-383						
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	5-46	349-383						
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)(STRAIN BA	5-39	348-382						
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	5-39	349-383						
PNRAM_INBME	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/89)	5-46	348-382						
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	5-46	349-383						
PNRAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	5-39	349-383						
PNRAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	5-39	349-383						
PNRAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	5-39	348-382						
PNIS_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	790-828							
PNIS_TNSVN	NON-STRUCTURAL PROTEIN	IMPATIENS NECROTIC SPOT VIRUS (STRAIN NL-01)	93-139	204-238						
PNIS_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR	3-37							
PNIS_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	3-37							
PNTPI_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69	110-144						
PNTPI_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-169	415-449	514-553					
PNTPI_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	56-90	248-289	349-399					
PNTPI_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	56-90	248-289	349-399					
PNTPI_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	154-193	415-501						
PPHO_HSV6U	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	189-223	689-733						
PPAP1_VACCC	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-180							
PPAP1_VACCV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	121-180							
PPAP1_VARV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VARIOLA VIRUS	121-180							
PPAP2_CAPVK	POLY(A) POLYMERASE REGULATORY SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	112-146							
PPAP2_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	93-134							
PPAP2_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	203-249							
PPAP2_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	203-249							
PPAP2_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	203-249							
PPE12_NPVAC	12.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-36	60-105						
PPE12_NPVOP	11.3 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	11-98							
PPE18_NPVAC	MAJOR DNA-BINDING EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	19-77	197-249						
PPE18_NPVOP	MAJOR DNA-BINDING EARLY PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	190-240							
PPE48_NPVAC	48.5 KD PROTEIN IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-41	48-89	93-133					
PPE48_NPVOP	47.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	47-82	165-199						
PPIV1_ADE07	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	414-448							
PPIV2_ADE02	PROTEIN VI PRECURSOR	HUMAN ADENOVIRUS TYPE 2	37-71							
PPIV5_ADE05	PROTEIN VI PRECURSOR	HUMAN ADENOVIRUS TYPE 5	37-71							
PPOL1_BAYMO	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	139-163	743-777	953-993	1265-1299	2239-2266	2309-2353	2368-2404	
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	139-163	681-705	743-777	937-994	1265-1299	2227-2264	2307-2350	2366-2402
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	120-161	165-216	230-273	377-415				
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	170-213	480-519	636-677	691-735	1153-1196	1378-1412	1906-1943	
PPOL1_TBRV3	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN 3)	123-270	928-977						
PPOL1_TRSVR	RNA1 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	181-206							
PPOL2_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	669-732	739-773	787-828				

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PPOL2_BAYMV	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN 11-1)	669-732	719-773	787-838						
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	385-406	542-602							
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	4-38								
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	138-206	334-368							
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	849-886	1008-1064	1382-1416	1459-1507	1576-1617				
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	244-289	446-491	620-663	1013-1074	1303-1344	1392-1443	1869-1910	2226-2260	
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	245-289	446-491	620-663	1013-1074	1303-1344	1392-1443	1779-1820	2136-2170	
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-130								
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	9-43	363-396	664-698	1045-1100	1498-1546	1607-1648	1805-1839	1901-1940	
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	13-49	1040-1086	1895-1940						
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	13-49	1021-1067	1876-1921						
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	13-49	1024-1070	1879-1924						
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	13-49	641-681	1022-1068	1877-1922					
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	13-49	1024-1070	1879-1924						
PPOLG_CYVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	120-154								
PPOLG_DEN1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN DJ6-1)	74-108								
PPOLG_DEN1A	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN AIIF 82-80)	74-108								
PPOLG_DEN1C	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN CV163677)	74-108								
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	74-108	833-873	960-994	1142-1179	1386-1420	1614-1648	2318-2354	2946-3016	
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	74-108	833-874	961-995	1143-1180					
PPOLG_DEN21	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	448-492								
PPOLG_DEN22	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M2)	448-495								
PPOLG_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2317-2351	
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2485-2551	
PPOLG_DEN2H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TH-36)	497-546								
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2317-2351	
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	213-247	398-432							
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	74-108	728-777	833-875	961-995	1146-1180	1246-1280	1418-1452	1615-1649	
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	448-497	552-595	681-715	866-900	966-1000	1205-1239			
PPOLG_DEN3U	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PUO-218)	614-663								
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	930-972	959-993	1385-1419	2224-2258	2480-2521	2704-2738	2940-3018	3980-3014	
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	955-993	1380-1414	2314-2355	2701-2735	2941-2975	2977-3011			
PPOLG_EC11O	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	213-259	1079-1113							
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1074-1115	1472-1518	1522-1570	1665-1706	1789-1823				
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETO	145-179	1076-1117	1474-1520	1524-1572	1667-1708				
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGEN	145-179	1076-1117	1474-1520	1524-1572	1667-1708				
PPOLG_ENMG1	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 1TA)	145-179								
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	78-112								
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	221-255	294-328	378-412	1101-1133	1493-1528	2165-2200			
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	220-254	293-327	377-411	1103-1164	1493-1528	2164-2199			
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	221-255	1101-1133	1493-1528	2164-2199					
PPOLG_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU (C-S	87-128	693-728							
PPOLG_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	221-255	283-317	377-411						
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	364-398								
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	440-493	626-660	695-729	1033-1070	1190-1235	1307-1343	1779-1820	2136-2170	
			2466-2500	2525-2559	2667-2708	3057-3098	3152-3193	3406-3440			
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	440-493	626-660	695-729	1033-1070	1173-1235	1779-1820	2136-2170	2385-2416	
PPOLG_HCVBK			2466-2500	2525-2559	2667-2708	3057-3098	3152-3193	3406-3440	3521-3562		
PPOLG_HCVED	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	337-398	2128-2165							
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC10)	65-99								

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	
PPOLG_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	364-398								
PPOLG_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	364-398								
PPOLG_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	236-270								
PPOLG_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	248-282								
PPOLG_HCVJ2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-KF)	353-398								
PPOLG_HCVJ3	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J2)	357-398								
PPOLG_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	364-398								
PPOLG_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	364-401	1716-1750	2082-2116						
PPOLG_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	364-398								
PPOLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	364-398	1716-1750	2082-2116	2468-2502	2538-2572				
PPOLG_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	357-405	2331-2365							
PPOLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	357-391	2331-2365							
PPOLG_HPAV2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	357-398	2328-2365	2444-2503						
PPOLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	2-43	101-135	203-237	870-904	1021-1055	1117-1151			
PPOLG_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	2-43	101-135	203-237	870-904	1021-1055	1117-1151			
PPOLG_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	2-43	101-135	203-237	870-904	1021-1055	1117-1151			
PPOLG_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	2-43	101-135	203-237						
PPOLG_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	80-114	182-216							
PPOLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	2-43	101-135	203-237	870-904	1021-1055	1103-1151			
PPOLG_HPAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	2-43	101-135	203-237	870-904	1021-1055	1103-1151			
PPOLG_HPAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN NBB)	2-43	101-135	203-237	870-904	1021-1055	1103-1158			
PPOLG_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	6-47	103-139	207-241	849-908	1025-1059	1115-1155	1138-1198		
PPOLG_HRV14	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	2-43	101-135	203-237						
PPOLG_HRV1A	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1020-1034	1393-1427	1479-1513	1877-1920					
PPOLG_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	362-396								
PPOLG_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	387-421	863-904	1133-1168						
PPOLG_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	836-897	1126-1169	1532-1593						
PPOLG_HUEV7	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1566-1607								
PPOLG_IBDVO	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	359-397	876-917	1032-1088	1403-1441	1896-1934				
PPOLG_IAEV1	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	134-168	250-291	475-524						
PPOLG_IAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823	
			3322-3359	3387-3428							
PPOLG_IAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823	
			3322-3359	3387-3428							
PPOLG_IAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	74-128	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823	
			3322-3359	3387-3428							
PPOLG_KUNJM	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	7-48	138-183	467-504	908-942	1337-1378				
PPOLG_LANYT	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	74-108	207-251	851-885	2464-2498	2528-2579	2740-2778	3225-3259	3389-3423	
PPOLG_LANYY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	68-102	431-465	963-996	1431-1472	1932-1966	2536-2591	2963-3001	3003-3037	
			3102-3145								
PPOLG_LIV	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	68-102	431-465							
PPOLG_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	68-123	211-272	431-465						
PPOLG_MCFA	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 126)	1331-1385								
PPOLG_MVEV	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	80-114	908-942	2049-2087	2630-2689	3036-3095	3390-3441			
PPOLG_OMV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	67-115	209-253	853-887	979-1013	1408-1449				
PPOLG_PEMVC	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	481-515	946-984	1072-1106						
PPOLG_POLIM	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	55-100	207-248	377-411	704-738	827-862	877-947	1021-1055	1167-1201	
			1488-1539	1787-1821	1948-1982	2202-2236	2258-2310	2805-2839	3003-3037		
PPOLG_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1046-1101	1414-1448	1500-1548	1806-1840	1902-1947			
PPOLG_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	9-43	899-933	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949	
PPOLG_POL3W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	9-43	897-931	1045-1100	1413-1447	1502-1547	1608-1649	1806-1840	1902-1947	

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLG_POL32	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	9-43	897-931	1045-1100	1413-1447	1502-1547	1608-1649	1806-1840	1902-1947
PPOLG_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23327)	9-43	896-930	1044-1098	1412-1446	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_PPVD	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PAPLEONO3 AND PAPLEON 12A(1)B)	9-43	896-930	1044-1099	1412-1446	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	164-208	441-503	728-789	815-867	921-955	1741-1782		
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	116-157	384-418	1146-1197					
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	164-208	403-437	440-502	727-768	814-873	920-954	1740-1781	
PPOLG_PRSVH	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	164-208	403-437	440-502	727-768	814-866	920-954	1740-1781	
PPOLG_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA)	68-102	434-468						
PPOLG_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA 5-1)	323-359							
PPOLG_PSBMV	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	325-359							
PPOLG_PVYC	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC (STRAIN DPDI)	253-315	355-389	539-589	935-976	984-1018	1080-1117	1568-1627	1808-1860
			1971-2015	2379-2413	2712-2746	2870-2907				
PPOLG_PVYRU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	131-196	701-735	802-856					
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	144-181	701-735	802-863	901-949	1401-1441	1492-1526	1728-1772	1777-1818
			2272-2306							
PPOLG_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	140-196	211-245	701-735	802-863	1401-1441	1492-1526	1728-1772	1777-1818
			1929-1970							
PPOLG_PWYSE	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	140-196	211-245	701-735	802-856				
PPOLG_PWYTB	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN SEVERE)	203-237							
PPOLG_PYFVI	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN TIP BRIGHT)	203-237							
PPOLG_STEVM	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	194-228	1111-1173	1379-1413	1858-1899	1930-1991	2702-2737		
PPOLG_SVDVH	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN M51-7)	106-143	673-707	739-773	975-1009	1404-1438			
PPOLG_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN HO '78)	15-49	1024-1070	1739-1813	1890-1924				
PPOLG_TBEVS	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG/21/72)	15-49	1024-1070	1890-1924					
PPOLG_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFTIN)	68-140	231-272	431-465	1138-1192	1431-1472	1929-1966	2182-2216	2335-2390
			2965-2999	3031-3092	3100-3143					
PPOLG_TEV	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	68-140	231-272	431-465	1138-1192	1431-1492	1932-1966	2336-2391	2987-3001
			3002-3037	3033-3094	3102-3145					
PPOLG_TMEVB	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (S	TOBACCO ETCH VIRUS	73-124	166-222	340-384	720-782	828-923	1148-1192	1416-1460	1494-1535
			1668-1702	1747-1781	1792-1826	2395-2434	2787-2821			
PPOLG_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN	1306-1340	1431-1511	1601-1633					
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1304-1338	1481-1516	1599-1663					
PPOLG_TUMV	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1306-1340	1483-1518	1601-1635					
PPOLG_TVMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	216-259	314-362	494-528	768-839	1443-1477			
PPOLG_VMV2	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	34-68	408-449	667-704	781-813	831-885	969-1017	1031-1072	1842-1877
			1686-1725	2116-2174	2701-2749	2814-2848				
PPOLG_WNV	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	68-103	202-236						
PPOLG_YEFV1	GENOME POLYPROTEIN	WEST NILE VIRUS	74-108	207-251	847-881	975-1007	1415-1447	2461-2495	2523-2576	2733-2775
			3320-3337	3383-3426						
PPOLG_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2958-2996	3097-3143
PPOLG_YEFV8	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2958-2996	3097-3143
PPOLH_POLIM	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899/01)	75-116	418-452	525-563	728-768				
PPOLN_EEVVT	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949	
PPOLN_FCVC6	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	345-382	898-932	1043-1079					
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	510-544							
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	4-43	269-410	986-1020	1023-1061				
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	338-379	1139-1177						
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	338-379							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	338-379	1139-1184						
PPOLN_MIDDV	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	337-378	1138-1176						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	922-977							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)							
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 2	AREA 3	AREA 4	AREA 7	AREA 8
PPOLN_RHDV	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	899-933	1942-1986	2444-2502					
PPOLN_RRVN	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	188-234	1006-347	409-457	1657-1716				
PPOLN_RRVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	895-939	1928-1962	2414-2467					
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	597-631	1083-1136						
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERUEN)	1506-1540	1551-1585	1720-1767	1862-1896				
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1094-1128	2338-2392						
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	919-971	1491-1525	1961-1996	2444-2478				
PPOLR_EPMV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1491-1525	1959-1994	2443-2476					
PPOLS_EEEV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	899-933	1127-1161						
PPOLS_EEEVJ	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	372-406	914-951						
PPOLS_EEVVE	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA3)(TEN BRO	373-407	915-952						
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1216-1250							
PPOLS_IBDV5	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	1216-1250							
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	134-168	231-286	470-523					
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	134-168	231-286	470-523					
PPOLS_IBDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	134-168	231-286	470-523					
PPOLS_IBDVP	NONSTRUCTURAL PROTEIN VP4	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	134-168	231-286	304-340					
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	115-149	212-267	451-504					
PPOLS_IPNV	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	134-168	249-283	470-523					
PPOLS_IPNVN	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	89-103	723-785						
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	716-786							
PPOLS_RRV2	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	1204-1238							
PPOLS_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN 213970)	35-69							
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	369-403	939-973						
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973							
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	999-1036							
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	999-1036							
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERUEN)	999-1036							
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	362-396							
PPOLS_SINDW	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	362-396							
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (WILD TYPE SB DERIVED FROM STRAIN AR339)	34-68							
PPOL_BAEVM	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	913-947							
PPOL_BLVAU	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	42-80	576-743	794-832	1001-1043				
PPOL_BLVJ	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	625-673							
PPOL_CAEVC	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	625-673							
PPOL_CAMVD	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	879-914							
PPOL_COYMV	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	177-211							
PPOL_ELAV9	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	87-121	333-367	447-498	838-876	896-930	1310-1351		
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	513-566	1022-1056						
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	513-568	1023-1038						
PPOL_FENVI	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	512-563	1021-1055						
PPOL_FIVPE	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	533-600	623-659	838-899					
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	429-473	606-663						
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	428-473	606-642						
PPOL_FMVD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	428-472	595-662						
PPOL_FOAMV	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-437							
PPOL_GALV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	140-174	217-256	285-326					
PPOL_HTLIA	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	528-562	673-740						
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	670-711							
PPOL_HVIA2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE	670-711							
PPOL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV/DSF2 ISOLATE	501-537	606-664						
PPOL_HVIB3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	513-549	639-676						

PCGENE	ALLNOTS	All Viruses (no bacteriophage)	AREA1	AREA1	AREA4	AREA3	AREA4	AREA7	AREA8
IDLENAME	PROTEIN	VIRUS							
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	513-549	618-676					
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	513-549	618-676					
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	500-536	626-663					
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	501-537	606-664					
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	505-541	610-668					
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	476-516	601-663					
PPOL_HV1N5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	504-540	609-667					
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	501-537	617-664					
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	500-536	626-663					
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	501-537	606-664					
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV2 ISOLATE)	513-549	693-676					
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	500-536	603-663					
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	500-536	601-663					
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE-234 ISOLA	500-536	626-663					
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	49-83	484-532	653-687	817-851			
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	356-390	464-562	612-666				
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	502-600	671-705					
PPOL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	376-410	484-526	529-577	653-687			
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	464-562	613-667					
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	44-78	356-390	464-529	633-667			
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	357-391	465-563	634-668				
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	46-80	473-562	633-667				
PPOL_DPHA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	484-518	522-577	653-687				
PPOL_ISRV	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	462-503						
PPOL_MLVAK	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	190-231						
PPOL_MLVAV	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	333-392						
PPOL_MLVF3	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	677-744						
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	682-749						
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD19)	682-749						
PPOL_MLVMO	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	682-749						
PPOL_MLVRD	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	677-744						
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	677-744						
PPOL_MPMV	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	62-129						
PPOL_OMVVS	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	470-504	571-613					
PPOL_RSVP	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	470-505	855-910					
PPOL_RTBV	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	646-684						
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-96	101-135	176-216	325-362	433-474	1005-1039
PPOL_SFV1	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-96	101-135	176-216	325-362	433-474	1005-1039
PPOL_SFV1L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	349-383	427-464	494-533				
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	124-165	419-467	496-530				
PPOL_SIVA3	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	351-385	637-678	737-771	938-979			
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-86						
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	477-516	642-683	742-783				
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	171-209	476-515	641-700	942-983	1020-1034		
PPOL_SIVCZ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-698	737-798					
PPOL_SIVCG	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	527-561	626-688					
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	9-57	446-483	629-673	793-827	912-946		
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	485-519	654-688					
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	485-519	654-688					
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SM14 ISOLATE)	448-482	617-651					
PPOL_SOCMV	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/SC11 ISOLATE)	451-485	620-654					
PPOL_SRV1	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	247-295	373-416					

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_VILV	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	470-504	578-613						
PPOL_VLVI	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	489-524	874-929						
PPOL_VLV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	489-524	874-929						
PPPI5_HCMVA	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	489-524	874-929						
PPR73_MMTVB	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-150	187-221						
PPR73_MMTVC	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN DR6)	132-200							
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	20-79							
PPR7L_MMTVO	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	61-95	142-201						
PPR7R_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	145-204	270-311						
PPYHD_CPVBM	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	141-200	266-307						
PPYID_NPVAC	POLYHEDRIN PRECURSOR	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	13-45							
PPYHD_NPVAS	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVBM	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-46							
PPYHD_NPVBS	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-54							
PPYHD_NPVLD	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVMB	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS V	14-48							
PPYHD_NPVOP	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYID_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVPF	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHED	14-48							
PPYHD_NPVSE	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS	14-48							
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN	14-48							
PPYHD_NPVSL	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PRASK_MSVKI	POLYHEDRIN	SPODOPTERA LITTORALIS NUCLEAR POLYHEDROSIS VIRUS	13-51							
PREV_BIV17	TRANSFORMING PROTEIN 21	KIRSTEN MURINE SARCOMA VIRUS	142-176							
PREV_EIAV9	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	77-115							
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	51-89							
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	51-89							
PREV_HV112	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	81-119							
PREV_HV1A2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CLONE 12)	33-69							
PREV_HV1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	32-69							
PREV_HV1B8	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	33-69							
PREV_HV1BN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	33-59							
PREV_HV1BR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	33-59							
PREV_HV1EL	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	33-69							
PREV_HV1H2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	32-66							
PREV_HV1H3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	33-69							
PREV_HV1JR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH) ISOLATE)	30-63							
PREV_HV1MA	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	33-66							
PREV_HV1MN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	31-66							
PREV_HV1NY	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NY) ISOLATE)	31-66							
PREV_HV1PV	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	32-69							
PREV_HV1SJ	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) AN	35-69							
PREV_HV1SC	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	33-69							
PREV_SIVAI	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	32-69							
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	26-77							
PREV_SIVAI	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	26-77							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/ CLONE GR	29-77							
PREV_SIVCZ	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	28-75							
PREV_VILV	REV PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	33-69							
PRR1_ASFKA	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	21-62							
PRR1_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	7-41	88-133	633-683					
PRR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	213-247	689-723						

#CGENE	ALLMOTIS	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS							
PRR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-668						
PRR1_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	76-110						
PRR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HERPESVIRUS SAIMIRI (STRAIN 11)	324-365						
PRR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-402						
PRR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN WR)	367-402						
PRR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARIOLA VIRUS	367-402						
PRR2_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	223-257						
PRR2_HSVB1	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EPSTEIN-BARR VIRUS (STRAIN B95-8)	89-117						
PRR2_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	101-135						
PRR2_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	106-140						
PRR2_SFVRA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	HERPESVIRUS SAIMIRI (STRAIN 11)	123-159						
PRR3_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-132						
PRR3_VACCP	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN COPENHAGEN)	98-132						
PRR3_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN L-IVP)	98-132						
PRR3_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN WR)	98-132						
PRL1_HSV1H	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VARIOLA VIRUS	98-132						
PRP34_VACCV	NEUROVIRULENCE FACTOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	171-212						
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN	116-150	465-540	733-791				
PRP0I_VACCC	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VARIOLA VIRUS	41-71	116-150	465-540	737-791			
PRP0I_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	243-291	622-656	734-791	934-988	1006-1057		
PRP0I_VARV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	243-291	622-656	734-791	934-988	1024-1058		
PRP0I_CAPVK	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	243-291	622-656	734-791	934-988	1006-1057		
PRP0I_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	CAPRIPOXVIRUS (STRAIN KS-1)	19-60	114-135	589-630				
PRP0I_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	COWPOX VIRUS	211-245	359-400	833-874				
PRP0I_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	211-245	359-400	833-874				
PRP04_VACCC	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VARIOLA VIRUS	211-245	359-400	833-874				
PRP04_VACCV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-116						
PRP04_VARV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	62-116						
PRP0J_VACCC	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VARIOLA VIRUS	62-116						
PRP0J_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-71						
PRP0J_VARV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	1-71						
PRP06_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VARIOLA VIRUS	1-71						
PRP06_VARV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	23-59						
PRP07_VACCV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VARIOLA VIRUS	23-59						
PRP07_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	43-93						
PRP0A_LELV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VARIOLA VIRUS	43-93						
PRP0L_EAV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1567	1721-1758	1958-1992	2109-2157			
PRP1_LAINN	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	1083-1117	1477-1518	1633-1673				
PRP1_LABEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-242	279-313					
PRP1_LADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BEIJING/11/56)	171-242	279-313	330-391				
PRP1_LAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/DUNEDIN/4/73)	171-242	279-313					
PRP1_LAILO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GULLMARYLAND/704/77)	171-242	279-313					
PRP1_LAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	168-242	279-313					
PRP1_LAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	168-242	279-313					
PRP1_LAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	171-242	279-313					
PRP1_LALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	171-242	279-313					
PRP1_LALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-242	279-313					
PRP1_LALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	171-242	279-313					
PRP1_LAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	171-242	279-313					
PRP1_LAMS8	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	171-242	279-313					
PRP1_LANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/80)	171-242	279-313					
PRP1_LAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	171-242	279-313					

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRP1_IA1N	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	168-242	279-313						
PRRP1_IA1KN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	171-242	279-313						
PRRP1_IA1V7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	171-242	279-313						
PRRP1_IAVIC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	171-242	279-313						
PRRP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	168-242	279-313						
PRRP1_IAWIS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/1952/68)	168-242	279-313						
PRRP1_IA2H3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	187-242	279-313						
PRRP1_IA2ON	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	171-242	279-313						
PRRP1_IA2TF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	171-242	279-313						
PRRP1_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66)	208-249							
PRRP1_INBLE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE]	208-249							
PRRP1_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	208-249							
PRRP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	330-384	648-686	707-752					
PRRP2_IAD1H2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	110-144	177-218						
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	110-144	177-218						
PRRP2_IAGUS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	110-144	177-218						
PRRP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	110-144	177-218						
PRRP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	110-144	177-218						
PRRP2_IAHTR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	110-144	177-218						
PRRP2_IAJE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	110-144	177-218						
PRRP2_IAJE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	110-144	177-218						
PRRP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	110-144	177-218						
PRRP2_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	110-144	177-218						
PRRP2_IAP10	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANT/60/68)	110-144	177-218						
PRRP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	110-144	177-218						
PRRP2_IAPUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	110-144	177-218						
PRRP2_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERS	110-144	177-218						
PRRP2_IATRM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	110-144	177-218						
PRRP2_IAV17	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	110-144	177-218						
PRRP2_IAVIC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	110-144	177-218						
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	110-144	177-218						
PRRP2_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78	110-144	177-218						
PRRP2_IAZID	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	110-144	177-218						
PRRP2_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	110-144	177-218						
PRRP2_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	110-144	177-218						
PRRP2_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	111-196	349-390						
PRRP2_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	111-196	349-390						
PRRP2_INBSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	111-196	349-383						
PRRP3_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	363-402	473-514	707-755				
PRRP3_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	363-402	473-514	518-567	707-755			
PRRP3_IACHI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	1-42	363-402	473-514	707-755				
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	363-402	473-514	707-755				
PRRP3_IAGUS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	1-42	363-402	473-514	707-755				
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77	1-42	363-402	473-514	707-755				
PRRP3_IAHK6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/233/84)	1-41	363-402	473-514	707-755				
PRRP3_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	1-42	363-402	473-514	707-755				
PRRP3_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	363-402	473-514	707-755				
PRRP3_IAKE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	1-42	363-402	473-514	721-755				
PRRP3_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KEV/139/79)	1-42	363-402	473-514	707-755				
PRRP3_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	1-42	363-402	473-514	707-755				
PRRP3_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	1-42	363-402	473-514	707-755				
PRRP3_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	1-42	363-402	473-514	707-755				

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PRRP3_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	1-42	363-402	473-514	707-755				
PRRP3_IAMEN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	363-402	473-514	707-755					
PRRP3_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ENGLAND/42/72)	7-41	363-402	473-514	707-755				
PRRP3_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	363-402	473-514	707-755				
PRRP3_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/65/85)	1-42	363-402	473-514	707-755				
PRRP3_IASE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80/82)	1-42	363-402	473-514	707-755				
PRRP3_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	363-402	473-514	707-755				
PRRP3_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	1-42	363-402	473-514	707-755				
PRRP3_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	1-42	363-402	473-514	707-755				
PRRP3_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/3)	1-42	363-402	473-514	707-755				
PRRP3_IAZ11	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	363-402	473-514	707-755				
PRRP3_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/77	7-41	363-402	473-514	707-755				
PRRP3_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	458-533							
PRRP3_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	458-533							
PRRP3_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	235-269	275-309						
PRRP3_INCJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	235-269	275-316						
PRRP3_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	THOGOTO VIRUS	343-401							
PRRPA_CVHJ2	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	358-392	495-531	1742-1776	1971-2008	3664-3724	3912-3946		
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	617-651	1764-1798	2769-2803	3586-3620	3821-3855	4075-4121	4319-4353	
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	20-64	617-651	943-1009					
PRRPB_CVMAJ	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	1129-1170	1303-1337	1453-1494	1692-1726	2620-2670			
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	1129-1170	1303-1337	1453-1494	1690-1724	2617-2668			
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	499-550	630-695	1460-1494	1509-1548	2246-2287			
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN K88/33)	115-156							
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	308-342	703-748	825-903	1021-1076	1114-1201			
PRRPL_BUNYW	RNA-DIRECTED RNA POLYMERASE	BUNYAMWERA VIRUS	2-36	80-114	308-363	371-412	1704-1741	1802-1861	1889-1935	
PRRPL_CDVO	RNA POLYMERASE	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	20-54							
PRRPL_HANTV	RNA POLYMERASE BETA SUBUNIT	HANTAAN VIRUS (STRAIN 76-118)	98-139	174-208	372-431	557-591	655-696	731-783	903-949	1276-1310
PRRPL_IRSVA	RNA POLYMERASE		1419-1453	1742-1776	1993-2027					
PRRPL_MABVM	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	827-861	1131-1179	1185-1220	1465-1517				
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	597-631	1046-1092	1490-1532	1804-1838	2029-2063	2194-2266		
PRRPL_MEASE	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	597-631	1046-1092	1490-1532					
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	197-231	790-824	869-903	1064-1109	1283-1317	2121-2155		
PRRPL_MDVB	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	164-214	220-254	267-304	576-627	732-807	1231-1286	1447-1481	1487-1531
			1566-1600	2191-2225						
PRRPL_PIVHT	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	167-208	210-295	1969-2013	2043-2077	2108-2142			
PRRPL_PIVH4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	136-170	575-628	730-785	1226-1284	1316-1357	1417-1479	1564-1630	1687-1721
			1901-1935							
PRRPL_PUUMH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	48-91	107-163	540-574	747-781	1064-1119	1293-1356	1499-1536	1994-2036
PRRPL_RABVP	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	98-132	381-415	444-488	557-591	655-696	731-783	922-976	1119-1153
			1742-1776	1940-1975	1993-2032					
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	73-114	197-231	696-730	1174-1222	1522-1580	1584-1618	2068-2123	
PRRPL_RDV	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	73-114	197-231	696-730	749-783	1174-1222	1522-1580	1584-2122	
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	17-61	534-575	844-878	918-985	1037-1071			
PRRPL_SEND3	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	398-439	641-678	833-887	1081-1115	1653-1687	1819-1870		
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2166-2216							
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	129-163	360-420	432-476	567-601	884-939	1059-1100	1319-1356	1820-1854
			1966-2016							

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	
PRRPL_SEQUB	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN 2)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034	
			2146-2216								
PRRPL_SVIWR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	98-139	174-208	537-591	653-696	731-765	1742-1776	1947-1981	1993-2027	
PRRPL_SYIV	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	547-627	747-781	1225-1280	1319-1353	1592-1626	1676-1715	2024-2058		
PRRPL_TSVVB	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	760-794	825-859	977-1014	1089-1137	1978-2032	2059-2107			
PRRPL_UUK	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR	46-101	399-433	539-573	589-634	1119-1153	1195-1226	1321-1379	1538-1572	
			1684-1725	1857-1898	2073-2127	2136-2200	2206-2247	2315-2368	2378-2419	2809-2843	
PRRPL_VSVIH	RNA POLYMERASE	LUKUNIEMI VIRUS	127-183	282-333	836-874	1030-1071	1481-1515	2015-2049	2061-2098		
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-713	720-763	1522-1567	1802-1836				
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-713	720-763	1802-1836					
PRRPO_ACLSV	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	674-713	720-763	1019-1074	1742-1799	2066-2107				
PRRPO_BWYVF	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	228-262	557-596	916-950	1235-1269					
PRRPO_BYDV1	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	204-241								
PRRPO_BYDV2	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	234-285								
PRRPO_BYDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	234-285								
PRRPO_CAMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	234-285								
PRRPO_CGMVS	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS	93-131								
PRRPO_CBDVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STR	7-41	387-428	446-480	726-767	1445-1479				
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	384-432	446-484							
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRAL	144-185	266-307	709-757	771-809					
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	147-181	268-407	501-535	750-802					
PRRPO_LYCVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	147-181	366-407	501-535	753-802					
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	301-346	805-886	926-960	1509-1543	2090-2124				
PRRPO_MCMV	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	301-345								
PRRPO_PEAMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	181-215	697-731							
PRRPO_PLAV1	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	321-358								
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1)	336-373	423-457							
PRRPO_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	336-373	423-457							
PRRPO_RCMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN	321-362	402-454	627-661	862-896					
PRRPO_REOVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	666-700								
PRRPO_REOVJ	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	310-361								
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DJ/JONES)	310-344								
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	310-361								
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805	
PRRPO_ROTPC	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805	
PRRPO_ROTPO	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	255-299	335-397	476-510	518-630	966-1007			
PRRPO_ROTSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	62-96	133-167	336-377	581-631	636-686	690-724	771-842		
PRRPO_SRMV	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	60-96	133-167	335-369	579-631	639-686	690-724	771-805		
PRRPO_SCVLA	PROBABLE RNA-DIRECTED RNA POLYMERASE	SOUTHERN BEAN MOSAIC VIRUS	618-665								
PRRPO_TACV	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	100-134	142-191							
PRRPO_TMGMV	RNA POLYMERASE	TACAIBE VIRUS	155-204	220-278	375-416	484-518	891-925	1030-1081	1285-1319	1981-2015	
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	401-449	682-720	765-818						
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE)	3-37	401-453	665-699						
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TODACCO MOSAIC VIRUS (STRAIN KOREAN)	3-37	401-453	665-699						
PRRPO_TNVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	3-37	401-453	860-894						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILENAME	PROTEIN	VIRUS							
PRPP_BRSVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	102-144						
PRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-158	160-216					
PRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	312-373						
PRPP_HRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-158	160-216					
PRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	99-158	160-216					
PRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-158	160-216					
PRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	99-158	160-216					
PRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-374	460-495					
PRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-374	460-495					
PRPP_MUMP1	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-374	460-495					
PRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	149-183	213-273					
PRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	214-276						
PRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-276						
PRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	100-134						
PRPP_PIIHB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45)	100-138						
PRPP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	80-114	313-364	375-437				
PRPP_PIIHD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	80-114	313-364	375-437				
PRPP_PIIHE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	80-114	313-364	375-437				
PRPP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/810)	66-114	237-271	313-364	375-437			
PRPP_PIIHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	218-281						
PRPP_PIJB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	218-281						
PRPP_PIJH4	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	31-130	414-470					
PRPP_PIJHA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	410-499						
PRPP_PIJHB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38	222-285					
PRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 61-333)	222-285						
PRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	117-174						
PRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	93-127						
PRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	93-127						
PRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	93-127						
PRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127						
PRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19	93-127						
PRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	313-364	375-447					
PRPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	323-364	375-447					
PRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	313-364	375-447					
PRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	313-364	375-447					
PRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	313-364	375-447					
PRPP_SYMV	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-278						
PRPP_VSVIG	RNA POLYMERASE ALPHA SUBUNIT	SONCHUS YELLOW NET VIRUS	138-173	233-281					
PRPP_VSVDM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C)	3-43						
PRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN M)	3-43						
PRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37						
PRPP_VSVSI	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37						
PSPHR_AMEPV	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	3-43						
PSP12_VACCV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	223-264	361-395					
PSP12_VARV	SERINE PROTEINASE INHIBITOR	VACCINIA VIRUS (STRAIN WR)	21-86						
PSP13_VACCC	SERINE PROTEINASE INHIBITOR 2	VARIOLA VIRUS	21-86						
PSP13_VACCV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-167	225-266					
PSP13_VARV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN WR)	118-167	225-266					

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PSPIA_VACCC	SERINE PROTEINASE INHIBITOR 3	VARIOLA VIRUS	122-171	219-270						
PTICS_CIVP1	SERINE PROTEINASE INHIBITOR 2 HOMOLOG FIRST	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-65							
PTAAJ_VACCV	TYPE II RESTRUCTION ENZYME CVIAJI	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	48-85							
PTAGI_FOWPV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS (STRAIN WR, COPENHAGEN, AND VARIOLA VI	95-133	173-207						
PTAGI_VACCV	TRANS-ACTIVATOR PROTEIN FP0	FOWLPOX VIRUS	3-51							
PTAGI_VARV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS (STRAIN WR), (STRAIN COPENHAGEN)	3-51							
PTALA_BFDV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-51							
PTALA_POVBO	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-333	464-498						
PTALA_POVMA	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	303-337	495-537						
PTALA_POVIC	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	464-501	587-621						
PTALA_POVLY	LARGE T ANTIGEN	POLYOMAVIRUS JC	153-187	589-623						
PTALA_POVMU	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41	206-238	417-478					
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	509-544							
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	507-542							
PTANI_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	504-539							
PTAMI_POVMU	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	339-378							
PTAMI_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	211-245	388-422						
PTAMI_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	192-226	369-403						
PTASM_POVBO	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	192-226	369-403						
PTASM_POVLY	SMALL T ANTIGEN	BOVINE POLYOMAVIRUS	41-85							
PTATR_NPVAC	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41							
PTATR_NPVBM	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	408-442	46-480	489-523					
PTATR_NPVOP	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	413-447	451-485	494-528					
PTAT_SIVAI	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	391-435	511-554						
PTAT_SIVAJ	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	73-109							
PTAT_VLV	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	137-185							
PTAT_VLV1	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514)	28-74							
PTAT_VLV2	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	40-74							
PTCB_FLV	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K53)	40-74							
PTEGP_H5V11	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	279-321							
PTEGP_H5VEA	TEGUMENT PHOSPHOPROTEIN US9	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	21-61							
PTEGP_H5VEB	NONSENSE									
PTEGP_H5VEK	NONSENSE									
PTEGP_H5VSB	NONSENSE									
PTEGU_EBV	NONSENSE									
PTEGU_HCMVA	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	768-802	821-855	918-972	1101-1138	1208-1242	1479-1516	1700-1753	1809-1867
			1870-1916	1920-1934	3108-3149					
PTEGU_H5V11	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	215-249	543-581	700-738	868-909	916-977	1004-1018	1163-1200
			1237-1296	2100-2215						
PTEGU_H5V6Q	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	731-765	801-842	1022-1059	1233-1269	1275-1309	1315-1370	1520-1531	1609-1669
			1673-1714	1749-1783	1820-1854	2670-2704				
PTEGU_H5VEB	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 8 / STRAIN G5)	30-71	224-262	567-608	713-757	951-1000	1091-1181	1192-1233	1357-1400
PTEGU_H5VSA	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	560-597	613-653	794-844	908-956	1108-1151	1135-1246	1399-1458	1487-1549
			1619-1657	1661-1693	1702-1736	1806-1843	1947-1981			
PTEGU_VZVD	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	520-558	560-598	613-652	672-710	777-822	846-898	948-986	1287-1332
			1414-1502							
PTERM_ADE02	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	657-696	713-747	804-841	933-972	1117-1158	1415-1471	1528-1562	1572-1620
			1633-1705	1719-1756	1945-1986	2727-2761				
PTERM_ADE05	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	490-572							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	490-582							
PTERM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	491-559							

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PTUN_AVISI	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	443-491	497-538						
PTMAF_AVISI	TRANSFORMING PROTEIN JUN	AVIAN SARCOMA VIRUS (STRAIN 17)	210-284							
PTOP1_SFVKA	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	247-288	295-340						
PTOP2_ASFB7	DNA TOPOISOMERASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	127-183	269-310						
PTOP2_ASFKE	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	146-180	481-515	601-642	945-979	1038-1093	1123-1162		
PTSIS_SMSAV	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	146-180	480-514	600-641	902-936	944-978	1038-1091	1122-1161	
PTYSY_VZVD	PDGF-RELATED TRANSFORMING PROTEIN P28-SIS	SIMIAN SARCOMA VIRUS	16-71							
PUBIL_NPVOP	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-260							
PUL01_HCMVA	UBIQUITIN-LIKE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	43-80							
PUL01_HSV11	HYPOTHETICAL PROTEIN UL1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	169-203							
PUL02_HSV2H	PROTEIN UL2	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	94-128							
PUL03_HSVEB	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	92-126							
PUL04_HSV11	GENE 60 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	70-104							
PUL06_EBV	PROTEIN UL4	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	102-136							
PUL06_HCMVA	VIRION PROTEIN BSRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-145	313-347	376-410					
PUL06_HSV11	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	216-250							
PUL06_HSVEB	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	36-94	103-141	294-329	333-371	416-479			
PUL06_HSVSA	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	62-170	257-413	448-503					
PUL06_VZVD	VIRION GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	90-140	151-194	302-336	364-405				
PUL09_HCMVA	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	87-131	150-409	704-738					
PUL09_HSVEB	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-50							
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	174-208							
PUL11_HCMVA	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL13_HCMVA	NONSENSE									
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-81	185-227						
PUL14_HSVEB	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	305-343							
PUL14_PRVN3	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	32-96	246-283						
PUL14_VZVD	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	43-95							
PUL16_HSVEB	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-103							
PUL17_HSV6U	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	266-300							
PUL21_HSVEB	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102	239-280							
PUL23_HCMVA	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-78	421-474						
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-253							
PUL24_ILTVT	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39							
PUL25_HCMVA	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V8)	161-195							
PUL25_HSV11	HYPOTHETICAL PROTEIN UL25	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	255-341	351-399						
PUL25_HSVEB	VIRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	370-411							
PUL25_HSVSA	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-413							
PUL25_ILTVT	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-92	183-231	365-406					
PUL25_VZVD	64.1 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V8)	38-84	165-206						
PUL27_HCMVA	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	190-188							
PUL31_HSVEB	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	244-285							
PUL31_VZVD	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	153-187							
PUL32_HSVEB	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	163-197							
PUL33_VZVD	MAJOR ENVELOPE GLYCOPROTEIN 100	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (STRAIN AB1)	342-376							
PUL33_HCMVA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	72-106	296-344						
PUL33_VZVD	G-PROTEIN COUPLED RECEPTOR HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	94-135	309-352						
PUL34_EBV	GENE 25 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	29-63							
PUL34_HCMVA	BFRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-200							
PUL34_HSV11	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	113-147							
PUL35_HCMVA	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	187-221							
PUL37_EBV	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	231-268							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)							
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUL37_HSV11	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	708-742			1				
PUL37_HSVEB	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	853-891							
PUL37_HSV5A	GENE 37 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	82-137	311-345	614-648	715-750	781-822			
PUL37_VZVD	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	6-65	682-741						
PUL36_HCMVA	GENE 36 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS).	719-753	786-827						
PUL41_VZVD	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	10-51							
PUL43_HSV11	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRU" (STRAIN DUMAS)	330-366							
PUL43_HSVEB	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	134-168	221-263						
PUL43_HCMVA	DNA-BINDING GENE 18 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	138-172							
PUL43_HSV5A	HYPOTHETICAL PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	72-109							
PUL43_VZVD	MEMBRANE PROTEIN UL43 HOMOLOG	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	27-68							
PUL45_HSV1K	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-363							
PUL45_HSV1M	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	96-137							
PUL47_HCMVA	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	96-137							
PUL47_HSV11	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-165	448-485	745-856					
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	473-518							
PUL47_HSVBP	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F	473-518							
PUL47_HSVE4	80.7 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	561-612							
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	183-246	582-620	825-866					
PUL47_VZVD	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	219-253	371-412	817-866					
PUL50_HCMVA	ALPHA TRANS-INDUCING FACTOR 91.8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	84-135	156-209	664-701					
PUL51_HSV11	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	155-189							
PUL51_HSVE4	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	118-169							
PUL51_HSVEB	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	121-162							
PUL51_VZVD	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	120-161							
PUL52_EBV	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL52_HSV11	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	188-235							
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-223							
PUL52_HSV5A	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	141-182	929-970						
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	445-483							
PUL53_HCMVA	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-342							
PUL53_HSV2H	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-48							
PUL54_HCMVA	PROTEIN UL55	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	131-185							
PUL70_HCMVA	HYPOTHETICAL PROTEIN UL64	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-73							
PUL74_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-99							
PUL87_HSV6U	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-79							
PUL87_HSV5A	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	729-770							
PUL88_HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366-400	582-616						
PUL91_HSV5A	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	357-391							
PUL92_EBV	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	24-58							
PUL92_HCMVA	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	188-222						
PUL92_HSV6U	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-116							
PUL92_HSV5A	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	101-145	174-216						
PUL93_HCMVA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	88-122							
PUL95_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	23-57	299-334						
PUL95_HSV6U	HYPOTHETICAL PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	259-293						
PUL96_HCMVA	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	13-151	333-370						
PUL96_HSV6U	HYPOTHETICAL PROTEIN UL96	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	51-103							
PUL96_HSV5A	HYPOTHETICAL PROTEIN 14R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	53-113							
PUL97_HCMVA	HYPOTHETICAL GENE 35 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	45-100							
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40	758-792						
PUL99_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1-36	130-171	330-364	439-492	541-575			

PCGENE	ALLNOTES	All Viruses (no bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUNG_HSV11	HYPOTHETICAL PROTEIN UL10	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	84-125			1				
PUNG_HSV23	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	227-268			1				
PUNG_HSV2H	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG)	188-229			1				
PUNG_HSV5A	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG5)	148-189			1				
PUNG_SFVKA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176							
PUS02_HSVEB	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115							
PUS02_HSVEK	GENE 61 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	79-120							
PUS07_HCMVA	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	86-120							
PUS11_HCMVA	HYPOTHETICAL PROTEIN HCLF5		2-36			1				
PUS14_HCMVA	HYPOTHETICAL PROTEIN HCLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								
PUS18_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	3-31							
PUS23_HCMVA	MEMBRANE PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	187-225							
PUS24_HCMVA	HYPOTHETICAL PROTEIN HCLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-333	535-578						
PUS26_HCMVA	HYPOTHETICAL PROTEIN HCLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-172							
PUS27_HCMVA	HYPOTHETICAL PROTEIN HCLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-584							
PUS30_HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40							
PVI23_AMYLE	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-169	274-312		1				
PVI43_NPVAC	133 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	18-52	326-367	591-649					
PV16K_TRVPS	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	313-350	1114-1150	1179-1213					
PV16K_TRVSY	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	75-117							
PV1A_BBMV	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	75-117							
PV1A_BMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	21-53	349-405	492-526	710-751	837-884	890-924		
PV1A_CCMV	1A PROTEIN	BROME MOSAIC VIRUS	4-66	348-411						
PV1A_CMVFN	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	4-53	242-276	348-389	487-526				
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-66	393-434	514-619	868-916				
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434	514-619	868-916				
PV1A_PSVI	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434						
PV1A_TAV	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	4-66			1				
PV2JK_HSVTH	1A PROTEIN	TOMATO ASPERMY VIRUS	11-59	392-433	852-923					
PV2AK_BDV	22.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN HZ)	177-211							
PV35K_NPVAC	24 KD ANTIGEN	BORNA DISEASE VIRUS	63-121	130-171						
PV38K_PLRVI	25 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-50							
PV38K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	116-150							
PV39O_ASFLS	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	116-150							
PV39K_PEBV	L1S 290 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L1S57)	138-183							
PV39K_TRVSY	29.6 KD PROTEIN	EARLY BROWNING VIRUS	115-152							
PV39K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM), AND (STRAIN PSG)	167-201							
PV3A_CCMV	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	45-79							
PV3A_CMVFN	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	768-806							
PV2A_PSVI	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	386-420							
PV3A_TAV	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	717-751							
PV30K_TRVTC	2A PROTEIN	TOMATO ASPERMY VIRUS	722-756							
PV360_ASFB7	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	105-138							
PV363_ASFB7	K360 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	53-87	131-192						
PV363_ASFB7	K363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	54-102	161-212	290-324					
PV3A_BMV	D363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	153-199							
PV3A_CMVFN	3A PROTEIN	BROME MOSAIC VIRUS	11-45							
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	215-255							
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	215-255							
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	215-255							
PV3K_ACLSV	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	215-255							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)							
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV31K_BWYVF	30.8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	72-106							
PV31K_BWYVG	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	196-233	404-451					
PV31K_PLRVI	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GB1)	113-147	196-233	407-451					
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	47-81	438-472						
PV58K_PLRVW	58 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	47-81	438-475						
PV66K_BWYVF	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-162	323-371						
PV70K_PLRVI	66.2 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	480-521							
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	98-144	514-548						
PV90K_AMVLE	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	98-144	409-443	514-548					
PVA04_VACCC	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-141							
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	32-66	231-275						
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	32-66	231-275						
PVA06_VACCC	PROTEIN A6	VARIOLA VIRUS	22-66	210-265						
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-213	314-355						
PVA06_VARV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	96-212	313-354						
PVA08_VACCC	PROTEIN A8	VARIOLA VIRUS	97-213	313-358						
PVA08_VACCV	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-216							
PVA08_VARV	PROTEIN A8	VARIOLA VIRUS	176-216							
PVA09_VACCC	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-81							
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	46-95							
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-134	141-175	219-283					
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	98-176	220-284						
PVA12_VACCC	PROTEIN A12	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-148							
PVA12_VARV	PROTEIN A12	VARIOLA VIRUS	111-152							
PVA18_VACCC	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN	433-467							
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	307-341	433-467						
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	307-341	433-467						
PVA20_VACCC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67							
PVA20_VARV	PROTEIN A20	VARIOLA VIRUS	1-67							
PVA22_VACCC	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-69							
PVA22_VARV	PROTEIN A22	VARIOLA VIRUS	39-80							
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-143	173-207	255-289	344-382				
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	95-143	173-207	255-289	344-382				
PVA32_VACCV	PROTEIN A31	VARIOLA VIRUS	88-126							
PVA33_VARV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR). AND (STRAIN COPENHAGEN								
PVA33_VARV	PROTEIN A32	VARIOLA VIRUS	217-251							
PVA36_VACCV	PROTEIN A33	VARIOLA VIRUS	63-97							
PVA36_VARV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR). AND (STRAIN COPENHAGEN)	28-67	109-155						
PVA37_VACCC	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	26-67							
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	24-65							
PVA38_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	24-65							
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-91							
PVA38_VARV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-91							
PVA39_VACCC	PROTEIN A38	VARIOLA VIRUS	44-91							
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	77-71							
PVA46_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109							
PVA46_VACCV	PROTEIN A46	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-126							
PVA46_VARV	PROTEIN A46	VACCINIA VIRUS (STRAIN WR)	81-126							
PVA47_VACCC	PROTEIN A46	VARIOLA VIRUS	81-126							
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-96	143-184						
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	62-96	143-184						

PCGENE	ALLAIOTS	All Viruses (no bacteriophage)							
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVA49_VACCC	PROTEIN A47	VARIOLA VIRUS	62-96	143-184					
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-40	126-160					
PVA49_VARV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	3-40	126-160					
PVA52_VACCC	PROTEIN A49	VARIOLA VIRUS	3-40	126-160					
PVA52_VACCV	PROTEIN A52	VACCINIA VIRUS (STRAIN COPENHAGEN)	91-132						
PVA57_VACCC	PROTEIN A52	VACCINIA VIRUS (STRAIN WR)	91-132						
PVA57_VACCV	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-168						
PVALI_NSVK	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	134-168						
PVALI_NSVN	ALI PROTEIN	MAIZE STREAK VIRUS (KENYAN ISOLATE)	230-269						
PVALI_NSVS	ALI PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	228-262						
PVALI_SLCV	ALI PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	228-262						
PVALI_TYDVA	ALI PROTEIN	SQUASH LEAF CURL VIRUS	117-151						
PVALJ_AUSVW	ALI PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	191-225						
PVALJ_BGMV	ALJ PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	44-78	83-124					
PVALJ_PYMV	ALJ PROTEIN	BEAN GOLDEN MOSAIC VIRUS	44-78	83-124					
PVALJ_SLCV	ALJ PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	30-74	87-121					
PVALJ_TGMV	ALJ PROTEIN	SQUASH LEAF CURL VIRUS	46-80	91-125					
PVAT_CAMVC	ALJ PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	44-78						
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	84-127					
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70						
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	91-127					
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	91-127					
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	91-127					
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	22-70	91-130					
PVAT_CERV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	26-70						
PVB03_VACCV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	99-138						
PVB04_VACCC	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-142						
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-123	321-372	496-530				
PVB04_VARV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	89-123	321-372					
PVB05_VACCC	PROTEIN B4	VARIOLA VIRUS	89-134	324-372	492-530				
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16M0)	234-298						
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	234-298						
PVB07_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	234-298						
PVB08_VACCC	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	234-298						
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	28-62						
PVB18_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-60						
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	26-60						
PVB18_VARV	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375	491-532					
PVB19_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375	491-532					
PVB19_VACCD	SURFACE ANTIGEN 5 PRECURSOR	VARIOLA VIRUS	337-378	491-532					
PVB19_VACCV	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-121						
PVB20_VACCC	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN 1)	85-119						
PVB21_VACCV	PROTEIN B20	VACCINIA VIRUS (STRAIN WR)	85-119						
PVBLI_BGMV	PROTEIN B21	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-85						
PVBLI_SLCV	BLI PROTEIN	VACCINIA VIRUS (STRAIN WR)	61-95						
PVBLI_TGMV	BLI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	159-193						
PVBRI_BGMV	BLI PROTEIN	SQUASH LEAF CURL VIRUS	159-193						
PVBRI_SLCV	BRI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	159-193						
PVBRI_TGMV	BRI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	172-206						
PVC01_VACCC	BRI PROTEIN	SQUASH LEAF CURL VIRUS	20-61						
PVC01_VACCV	PROTEIN C1	TOMATO GOLDEN MOSAIC VIRUS	25-59						
		VACCINIA VIRUS (STRAIN COPENHAGEN)	37-82	262-302	191-442				

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PVC04_SFVKA	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	37-82	262-302	391-442					
PVC04_VACCC	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	175-223	374-408						
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46							
PVC04_VARV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46							
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	12-46							
PVC05_SFVKA	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	82-123							
PVC05_VACCC	PROTEIN C5	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-68							
PVC05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	31-68							
PVC05_VARV	PROTEIN C5	VARIOLA VIRUS	32-70	73-121						
PVC08_SFVKA	HYPOTHETICAL PROTEIN C8	SHOPE FIBROMA VIRUS (STRAIN KASZA)	45-86							
PVC09_SFVKA	HYPOTHETICAL PROTEIN C9	SHOPE FIBROMA VIRUS (STRAIN KASZA)	63-106							
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-116	168-226	289-333	575-612				
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	82-116	168-226	289-333	575-612				
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180							
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-176							
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	136-170							
PVC12_SFVKA	HYPOTHETICAL PROTEIN C12	SHOPE FIBROMA VIRUS (STRAIN KASZA)	2-36							
PVC13_SFVKA	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-66	137-182	189-240					
PVC16_VACCC	PROTEIN C16/B22	VACCINIA VIRUS (STRAIN COPENHAGEN)	142-176							
PVC17_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	100-155	225-259						
PVC18_VACCC	PROTEIN C18/D24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-98							
PVC19_SFVKA	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	56-97							
PVC19_VACCC	PROTEIN C19/B25	VACCINIA VIRUS (STRAIN COPENHAGEN)	218-252							
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-184	670-709						
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	136-174	191-225	260-294					
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-175	308-356						
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS	136-174	230-266	311-382					
PVCAP_HSVEB	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	150-184	304-352						
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	479-530	673-714	735-799					
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	105-160	292-326						
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	128-198	316-350						
PVCGJ_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	110-248							
PVD05_FOWPI	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	145-181							
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-157							
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	123-157							
PVD05_VARV	PROTEIN D5	VARIOLA VIRUS	123-157							
PVD09_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	126-160							
PVD09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	126-160							
PVD09_VARV	PROTEIN D9	VARIOLA VIRUS	126-160							
PVD10_FOWPI	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	65-99	188-222						
PVD10_SFVKA	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	4-52							
PVD10_VARV	PROTEIN D10	VARIOLA VIRUS	67-103							
PVDDP_CAMVC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	1-35							
PVDDP_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	1-35							
PVDDP_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	1-35							
PVDBP_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	1-35							
PVDBP_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	1-35							
PVE02_VACCC	DNA-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	282-336							
PVE02_VACCV	PROTEIN E2	VACCINIA VIRUS (STRAIN WR)	282-336							
PVE02_VARV	PROTEIN E2	VARIOLA VIRUS	282-336							
PVE03_VACCC	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-61							
PVE03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN [illegible])	17-61							
PVE03_VARV	PROTEIN E3									

PCGENE	ALLNIOTIS	All Viruses (no bacteriophage)							
ELLNAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVE03_VACCC	PROTEIN E3	VARIOLA VIRUS	17-61						
PVE03_VACCD	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-93						
PVE03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN DAIREN 1)	38-103						
PVE03_VARV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	38-103						
PVE06_VACCC	PROTEIN E6	VARIOLA VIRUS	38-103						
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-139	232-266					
PVE06_VARV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	105-139	232-266					
PVE18_NPVAC	PROTEIN E6	VARIOLA VIRUS	105-139	367-401					
PVE1_HPV1A	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	112-163						
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	137-171						
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	56-90						
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-67	133-167					
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	56-90						
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	59-96						
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89	312-346					
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	23-87						
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-67	119-174					
PVE1_PAPVE	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	265-299						
PVE16_NPVAC	E1 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	176-210						
PVE2_CRPVK	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-117						
PVE2_HPV05	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	3-44						
PVE2_HPV08	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	5-37	276-310	342-383	437-471			
PVE2_HPV16	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	5-55	148-182					
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	315-349					
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	65-100						
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	3-37	159-193					
PVE2_HPV31	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	13-47	159-193					
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	61-105						
PVE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 33	63-101	297-331					
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 35	62-106	158-192					
PVE2_HPV41	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	74-110	323-357					
PVE2_HPV42	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 41	6-54						
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	5-55	148-182					
PVE2_HPV6B	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	154-191						
PVE2_PAPVE	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	13-47	179-213					
PVE2_PCPVI	PROBABLE E2 PROTEIN	DEER PAPILLOMAVIRUS	107-141						
PVE2_RUPVI	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	113-150						
PVE39_NPVAC	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	318-361						
PVE4_NPVOP	EARLY 39 KD PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	63-106	307-341					
PVE4_HPV18	EARLY 39 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	20-57						
PVE4_HPV41	PROBABLE E4 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	119-156						
PVE5_HPV6B	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	42-86						
PVEF_GVTN	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	63-97						
PVENV_BEV	VIRAL ENHANCING FACTOR (VEF) (104 KD GLYCOP	HUMAN PAPILLOMAVIRUS TYPE 3B	3-40	96-130					
PVENV_DHVII	ENVELOPE PROTEIN	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	681-719						
PVENV_MCV1	ENVELOPE GLYCOPROTEIN PRECURSOR	BEAVE VIRUS (BEV)	195-229						
PVENV_MCV2	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K)	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	318-366						
PVENV_THOGV	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K)	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCV1)	232-286						
PVENV_VACCC	ENVELOPE GLYCOPROTEIN PRECURSOR (SURFACE	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCV11)	232-286						
		THOGOTO VIRUS (THO)	313-334						

PCGENE	ALLNOTIS	All Viruses (no bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVENV_VACCI	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-293						
PVENV_VACCP	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN IHD-J)	237-293						
PVENV_VACCV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN L-IVP)	237-293						
PVENV_VARV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VACCINIA VIRUS (STRAIN WR)	237-293						
PVETS_NPVAC	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K	VARIOLA VIRUS	237-293						
PVTOI_VACCC	ECORI-T SITE PROTEIN ETS	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	1-53						
PVTOI_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN), AND VACCINIA VIRUS	46-80	124-158					
PVTO1_VACCP	PROTEIN F1 (FRAGMENT)	VACCINIA VIRUS (STRAIN WR)	46-80	124-158					
PVTO1_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110						
PVTO5_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	71-110						
PVTO1_VACCP	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-129	282-320					
PVTO1_VACCV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	81-129	282-320					
PVTO5_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	81-129	283-321					
PVTO6_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	81-122	281-322					
PVTII_VACCC	PROTEIN F6	VARIOLA VIRUS	8-44						
PVTII_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-250	269-315					
PVTII_VARV	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	213-254	265-311					
PVTI2_VACCC	PROTEIN F11	VARIOLA VIRUS	41-75	269-315					
PVTI2_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67	102-142	199-236	330-388	344-381		
PVTI2_VARV	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	1-67	102-142	199-236	330-388	344-381		
PVTI6_VACCC	PROTEIN F15	VARIOLA VIRUS	1-67	199-236	330-388	347-381			
PVTI6_VACCP	PROTEIN F15	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-194						
PVTI6_VARV	PROTEIN F15	VACCINIA VIRUS (STRAIN L-IVP)	155-194						
PVFP1_FOWPV	PROTEIN FP1	VARIOLA VIRUS	155-194						
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	1-43						
PVFPI_FOWPV	PROTEIN FP1	FOWLPOX VIRUS	139-173	239-273					
PVFUS_VACCC	FPLEFT PROTEIN (FRAGMENT)	FOWLPOX VIRUS (STRAIN FP-1)	23-57						
PVFUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	77-111						
PVFUS_HSV11	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	30-64						
PVG01_VACCC	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	30-64						
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	271-306	312-363	391-647	730-764			
PVG01_VARV	PROTEIN G1 (FRAGMENT)	VACCINIA VIRUS (STRAIN WR)	301-339	240-278					
PVG01_HSVEB	PROTEIN G1	VARIOLA VIRUS	301-339						
PVG01_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	143-177						
PVG01_VARV	GENE 3 PROTEIN (ORF L1)	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A) (EHV-1)	143-177						
PVG03_VACCC	PROTEIN G3	VARIOLA VIRUS	64-98						
PVG03_VARV	PROTEIN G3	VACCINIA VIRUS (STRAIN COPENHAGEN)	117-158	235-289	335-389				
PVG06_HSV11	PROTEIN G3	VARIOLA VIRUS	117-158	235-289	335-389				
PVG07_HSV11	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	61-109						
PVG07_VACCC	HYPOTHETICAL GENE 7 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	69-103						
PVG07_VARV	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-175	324-358					
PVG09_VACCC	PROTEIN G7	VARIOLA VIRUS	114-175	324-358					
PVG09_VACCV	PROTEIN F1 (PROTEIN G9)	VACCINIA VIRUS (STRAIN COPENHAGEN)	304-338						
PVG09_VARV	PROTEIN F1 (PROTEIN G9) (FRAGMENT)	VACCINIA VIRUS (STRAIN WR)	304-338						
PVG10_HSV11	PROTEIN F1 (PROTEIN G9)	VARIOLA VIRUS	304-338						
PVG12_SPVIR	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	63-97						
PVG16_HSV5A	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R4A2 B	11-45						
PVG17_HSV11	HYPOTHETICAL GENE 16 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	58-93						
PVG18_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	92-129	177-211					
PVG1L_AMEPV	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	174-208	215-256					
PVG1_SPVIR	G1L PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	407-441						

PCGENE	ALLNOTES	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
ENTRYNAME	PROTEIN	VIRUS							
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-RRA2 D	136-170	316-397	120-357				
PVG2_IISVII	CAPSID PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	181-221						
PVG10_IISVII	HYPOTHETICAL GENE 32 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	117-158	417-439	660-692	899-1035			
PVG23_IISVII	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	1-72	74-108					
PVG38_IISVII	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	184-219						
PVG8R_ANIEPV	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	251-290						
PVG1_SPV1R	HYPOTHETICAL GIR PROTEIN	ANISACTA MOOREI ENTOMOPOXVIRUS (ANIEPV)	39-63	184-218					
PVG1_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-RRA2 D	223-256	285-326					
PVG13_IISVII	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	255-310						
PVG24_IISVII	HYPOTHETICAL GENE 31 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	148-183						
PVG33_IISVII	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	225-279						
PVG34_IISVII	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	17-90						
PVG36_IISVII	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	133-172						
PVG39_IISVII	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	84-118						
PVG1_SPV1R	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	174-158	286-300					
PVG2_SPV1R	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-RRA2 II	8-49	163-196	203-244				
PVG40_IISVII	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	6-54	87-121					
PVG35_IISVSA	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	116-150	263-296	324-361	643-677			
PVG46_IISVII	HYPOTHETICAL GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	121-162						
PVG48_IISVSA	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	45-86	919-1078	1231-1321				
PVG49_IISVSA	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	169-207						
PVG4R_ANIEPV	HYPOTHETICAL GENE 49 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-417	611-666	733-767				
PVG4_SPV4	GIR PROTEIN	ANISACTA MOOREI ENTOMOPOXVIRUS (ANIEPV)	68-102						
PVG51_IISVII	GENE 4 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	4-38						
PVG52_IISVSA	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	84-133	89-133					
PVG53_IISVII	GENE 51 GLYCOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	19-70	133-157	162-196				
PVG54_IISVII	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	67-127						
PVG55_IISVII	HYPOTHETICAL GENE 54 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	355-396						
PVG56_IISVSA	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	101-135						
PVG58_IISVII	HYPOTHETICAL GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	126-178						
PVG59_IISVII	HYPOTHETICAL GENE 57 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	131-182	328-412	644-678	790-784	846-880	1111-1145	
PVG59_IISVSA	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	10-72	89-123					
PVG3_SPV1R	GENE 59 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	169-209						
PVG61_IISVII	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-RRA2 B	65-103						
PVG60_IISVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	265-299						
PVG65_IISVII	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	346-384						
PVG66_IISVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	803-839	1203-1234					
PVG67_IISVII	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	134-188	328-410					
PVG68_IISVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	379-413	501-546	1321-1369	1478-1541			
PVG72_IISVII	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	245-288	728-737	912-949				
PVG73_IISVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	447-484	708-717					
PVG8_SPV1R	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	271-305	388-422					
PVGF1_IDV8	GENE 8 PROTEIN	SPIROPLASMA VIRUS SPV1-RRA2 D	5-51						
PVGH1_HCMVA	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (I	142-179	1233-1267	2119-2156	3388-3424	3473-3511	3517-3556	3761-3795
PVGL1_CVPR8	GLYCOPROTEIN 180D PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)							
PVGL1_CVDF	E1 GLYCOPROTEIN PRECURSOR (MATRIX GLYCOP	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/117004 / DU	213-257						
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN F15	642-676	810-845	993-1088	1263-1305			
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN L9)	810-845	993-1109	1263-1305				
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN LY-138)	642-676	810-845	993-1109	1263-1305			
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN MEBUS	642-676	810-845	993-1109	1263-1305			
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN QUEBEC)	642-676	810-845	993-1109	1263-1305			

PEPGENE	ALLAHOTES	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
ENTRY NAME	PROTEIN	VIRUS						
PVGL2_CVI32	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN VACCINE)	642-676	930-985	993-1109	1203-1305		
PVGL2_CVHJ2	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	HUMAN CORONAVIRUS (STRAIN 229E)	770-916	1035-1112				
PVGL2_CVM4	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	641-684	1001-1117	1270-1335			
PVGL2_CVM4S	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN A59)	591-632	949-1019	1118-1263			
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-1)	641-684	1001-1117	1270-1335			
PVGL2_CVMJH1	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS MHV (STRAIN JHM)	501-543	860-976	1139-1174			
PVGL2_CVPF5	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-481	692-733	889-923	1040-1186	1352-1389
PVGL2_CVPNH	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-923	1040-1186	1352-1389
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	70-110	448-480	690-731	887-921	1038-1184	1350-1387
PVGL2_CVPUR	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1038-1184	1350-1387
PVGL2_CVPXR	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/1)7004 / BRU	224-258	468-509	663-699	816-962	1138-1165	
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4) (PRCV)	224-258	468-509	665-699	816-962	1138-1165	
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1038-1184	1350-1387
PVGL2_EBV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO		68-102					
PVGL2_FIPV	PROBABLE MEMBRANE GLYCOPROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-245	451-485	693-736	892-926	1042-1189	1355-1392
PVGL2_IBV6	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	791-903	1017-1091				
PVGL2_IBVE	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	737-778	1036-1090				
PVGL2_IBVD7	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	773-903	1017-1091				
PVGL2_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8533)	737-778	1036-1090				
PVGL2_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	737-778	772-904	1036-1090			
PVGLB_HCMVA	E2 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-88	128-162	436-484	844-878		
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	33-88	128-162	437-478	851-885	845-879	
PVGLB_HSV1	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	838-890					
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	837-889					
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	837-889					
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	838-890					
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	838-890					
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	838-890					
PVGLB_HSV2U	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAR)	837-871					
PVGLB_HSV8U	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 8 / STRAIN UGANDA-1103)	33-71	185-225				
PVGLB_HSV8J	GLYCOPROTEIN J PRECURSOR	BOVINE HERPESVIRUS TYPE 1	859-913					
PVGLB_HSV8C	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BNY)	460-474	848-902				
PVGLB_HSV8I	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	863-900					
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS33A)	742-776	911-961				
PVGLD_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	414-513	847-900				
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	742-776	911-961				
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	742-776	911-961				
PVGLB_HSVKD	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	742-776	910-960				
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	390-435	649-683	787-845			
PVGLB_MDHVS	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 1)	240-284	406-447				
PVGLB_PRVB	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	206-260	427-475	693-734	844-878	860-894	
PVGLB_VZVD	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	847-881					
PVGLC_HSV11	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	92-133	396-430	809-867			
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510					
PVGLC_HSV1	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510					
PVGLC_HSV2	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	442-476					
PVGLC_HSV2I	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	443-477					
PVGLC_HSVBC	GLYCOPROTEIN C PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	233-269					
PVGLC_HSVEB	GLYCOPROTEIN GIII PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	182-218					
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	63-97					
PVGLC_HSVGD	SECRETORY GLYCOPROTEIN GP37-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	63-97					
PVGLC_HSVGG	SECRETORY GLYCOPROTEIN GP37-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	63-96					
PVGLC_HSVGJ	SECRETORY GLYCOPROTEIN GP37-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)						

PEPTIDE	ALIGNED	All Viruses [no bacteriophage]							
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVGLC_PRVIF	SECRETORY GLYCOPROTEIN GP71-85 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	63-97						
PVGLC_V2VD	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUSKHAUSER / DECKE	183-235						
PVGLC_V2VS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	280-331						
PVGLD_HSVEA	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	280-331						
PVGLD_HSVEB	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	89-133						
PVGLD_HSVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABDP) AND (STRAIN KEN	139-173						
PVGLE_HSV11	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	139-173						
PVGLE_HSV12	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	111-145						
PVGLF_BRSVA	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-159						
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN ATSOU)	146-202	304-343					
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	146-202	267-302	306-347				
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	146-202	267-301	306-351				
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	218-269	340-381	368-402				
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	116-202	267-302	306-349				
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	116-202	267-302	306-349				
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	116-202	267-302	306-347				
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	116-202	267-302	306-349				
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON) AND (STRAIN HALLE)	116-184	228-269	433-500				
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	119-187	231-273	455-501				
PVGLF_MEINM	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	116-184	228-269	453-500				
PVGLF_MUMPA	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	101-179	235-272	447-502			
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	101-179	235-272	447-502			
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	101-179	235-271	447-502			
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	20-54	101-179	235-272	447-502			
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	117-182	231-272	426-511				
PVGLF_NDVD3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	122-182	231-272	426-511				
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HERTS/33)	117-182	231-272	426-511				
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN DI-HITCHNER/47)	122-182	231-272	426-511				
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	133-182	231-272	426-511				
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LASOTA)	133-182	231-272	426-511				
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	117-182	231-272	426-512				
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/68)	122-182	231-272	433-512				
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	117-182	231-272	426-511				
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B/48)	122-182	231-272	426-517				
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	122-182	231-272	426-512				
PVGLF_PIIIC	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	39-63	197-266	309-350	333-381			
PVGLF_PIIII	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	123-174	207-267	459-503				
PVGLF_PIIIG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	92-183	477-528					
PVGLF_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	93-183	477-528					
PVGLF_PIIIB	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	93-183	477-528					
PVGLF_PIIIH	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	117-182	207-241	456-518				
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	117-182	207-241	462-523				
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	113-180	224-263	448-493				
PVGLF_SENDS	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	112-180	224-263	448-506				
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN 2 / HOST MUTANT 5)	131-188	211-271	463-513				
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	127-186	211-271	463-513				
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	127-186	218-271	463-513				
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	127-188	211-271	463-513				
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	127-188	211-271	463-513				
PVGLF_SVI	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	96-186	436-504					
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN WR)	100-171	241-275	451-487				
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	105-161	190-224	437-498				

PFGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PVGLG_BASVC	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	506-612							
PVGLG_BIRSV1	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	30-70	104-138						
PVGLG_BIRSV2	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	30-81							
PVGLG_BIRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB611	30-85							
PVGLG_BIRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB1734	30-85							
PVGLG_BIRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB1837)	30-107							
PVGLG_BIRSV6	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6190)	30-85							
PVGLG_BIRSV7	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6356)	30-85							
PVGLG_BIRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6614)	30-85							
PVGLG_BIRSVA	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	30-81							
PVGLG_BIRSVL	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	30-67							
PVGLG_BIRSVE	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRA	35-85							
PVGLG_SIGNA	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	111-305							
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SIGMA VIRUS	344-381	464-498						
PVGLG_VSVIO	SPIKE GLYCOPROTEIN PRECURSOR	SONCHUS YELLOW NET VIRUS	488-523							
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	163-197							
PVGLH_EBV	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	476-510							
PVGLH_HCMVA	GLYCOPROTEIN GP93 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	33-87	160-201	336-380	653-694				
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-137	270-311	693-741					
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	102-136	693-740						
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	447-481							
PVGLH_HSV1G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	447-481							
PVGLH_HSV1S	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN GS)	337-406							
PVGLH_HSV8C	GLYCOPROTEIN H PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	364-416							
PVGLH_HSVE1	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	314-378	414-455						
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HV	337-372	407-448						
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	32-66	374-413	684-732					
PVGLH_MCMVS	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	440-474							
PVGLH_PRVKA	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN KAPLAN)	216-260							
PVGLH_PRVNJ	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN NIA-3)	216-260							
PVGLH_PRVRJ	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN RICE)	216-260							
PVGLH_VZVD	PROBABLE GLYCOPROTEIN H PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	455-506							
PVGLI_HCMVA	INTERMEDIATE EARLY GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-111	333-389						
PVGLN_BUNGE	N POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	312-367	683-737	1228-1282					
PVGLN_BUNLJ	N POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	643-677	916-950						
PVGLN_BUNSH	N POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	643-677							
PVGLN_BUNYW	N POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	340-374	504-563	903-939					
PVGLN_DUGBV	N POLYPROTEIN PRECURSOR	DUGBE VIRUS	933-989	1239-1300						
PVGLN_HANTB	N POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	693-727							
PVGLN_HANTH	N POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	72-106							
PVGLN_HANTL	N POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	72-106							
PVGLN_HANTV	N POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	72-106							
PVGLN_INSV	N POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	1067-1101							
PVGLN_PHV	N POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	73-111							
PVGLN_PTPV	N POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	149-231							
PVGLN_SEOUH	N POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	693-737							
PVGLN_SEOUR	N POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	694-738							
PVGLN_SEOUS	N POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	693-730							
PVGLN_BEFV	N POLYPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	377-414	533-569						
PVGLP_BEV	NONSTRUCTURAL GLYCOPROTEIN GNS PRECURSO	BERNE VIRUS	43-82	90-124	622-656	1128-1236				
PVGLX_PRVRJ	PEPLOMER GLYCOPROTEIN PRECURSOR	PSEUDORABIES VIRUS (STRAIN RICE)	420-461							
PVGLY_TUNIN	SECRETED GLYCOPROTEIN GX	TUNIN ARENAVIRUS	301-349							
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR									

PCGENE	ALLAN015	All Viruses (no bacteriophages)	AREA1	AREA2	AREA1	AREA1	AREA1	AREA2	AREA1
ELLNAME	PROTEIN	VIRUS							
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	117-360	388-432					
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	118-361	389-433					
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	123-367	395-432					
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	124-338	333-363	395-432				
PVGLY_NIDPE	GLYCOPROTEIN POLYPROTEIN PRECURSOR	NIDPEIA VIRUS	316-359						
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENA VIRUS	114-355						
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	113-363						
PVGLY_TACV1	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V1)	103-331	382-416					
PVGLY_TACV2	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V2)	102-330	381-415					
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	103-331	382-416					
PVGNNB_CPMV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	COWPEA MOSAIC VIRUS	835-869						
PVGNN1_CPMV	GENOME POLYPROTEIN 1)	COWPEA MOSAIC VIRUS	160-200						
PVGNN1_CPSMV	GENOME POLYPROTEIN N1	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-236	338-392	374-915				
PVGNN1_RCMV	GENOME POLYPROTEIN N1	RED CLOVER NOTTLE VIRUS	837-871	912-946					
PVGP8_EBOV	GENOME POLYPROTEIN N1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	94-149						
PVGP_EBOV	PRODABLE MEMBRANE ANTIGEN GP85	EBOLA VIRUS	280-331	334-368	469-503				
PVGP_MABVM1	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	562-596						
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	562-596						
PVIH2_VACCC	STRUCTURAL GLYCOPROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-92						
PVIH3_VACCV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN WR)	58-94						
PVIH3_VARV	LATE PROTEIN H3	VARIOLA VIRUS	58-92						
PVIH5_VACCC	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-185						
PVIH5_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	118-185						
PVIH5_VARV	PROTEIN H5	VARIOLA VIRUS	136-203						
PVIHEL_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	126-160						
PVIHP_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	216-319						
PVIHP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	216-319						
PVID1_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	130-193	210-244					
PVID1_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	130-193	210-244					
PVID1_VARV	PROTEIN I3	VARIOLA VIRUS	130-193	210-244					
PVIO6_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	58-92						
PVIO6_VARV	PROTEIN I6	VARIOLA VIRUS	58-92						
PVIO7_VARV	PROTEIN I7	VARIOLA VIRUS	373-407						
PVIO8_VACCC	PUTATIVE RNA HELICASE I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	548-589						
PVIO8_VACCV	PUTATIVE RNA HELICASE I1	VACCINIA VIRUS (STRAIN WR)	548-589						
PVIO8_VARV	PUTATIVE RNA HELICASE I1	VARIOLA VIRUS	548-589						
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	78-112	171-205	368-402	416-450			
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	78-112	171-205	368-402	416-450			
PVIE1_MCMVS	IMMEDIATE-EARLY PROTEIN I	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	244-297						
PVIE2_NPVOP	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	94-128	203-395					
PVIEN_NPVAC	IMMEDIATE-EARLY REGULATORY PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	337-407						
PVIF_CAEVC	VIRION INFECTIVITY FACTOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	33-92						
PVIF_FIVPE	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	33-94						
PVIF_FIVSD	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	33-80						
PVIF_HIV1A2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-42	62-96					
PVIF_HIV1B1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10,BRU,HXB2,PV	1-42	62-96					
PVIF_HIV1B3	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	1-42	62-96					
PVIF_HIV1EL	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1-42	62-96					
PVIF_HIV1JR	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	1-42	61-95					
PVIF_HIV1MA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-36						
PVIF_HIV1NN	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	1-42	62-96					
PVIF_HIV1NS	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	1-42	62-96					
PVIF_HIV1NA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL							

PGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
NAME	PROTEIN	VIRUS							
PVIF_HIVIND	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIT-A)	1-43	61-96					
PVIF_HIVIOY	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ANK ISOLATE)	1-43	61-96					
PVIF_HIVIOY	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	1-43	61-96					
PVIF_HIVIBR1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BREAST ISOLATE)	1-43	61-96					
PVIF_HIVIB4	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	1-43						
PVIF_HIVIZ1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE ISOLATE	1-43	62-96					
PVIF_HIVIZ6	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	1-43	62-96					
PVIF_HIVIO1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205 7)	147-193						
PVIF_HIVIRO	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	153-193						
PVIF_HIVIRO	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	163-197						
PVIF_OVIVIS	VIRION INFECTIVITY FACTOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	44-114						
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	2-38	150-202					
PVIF_SIVAG	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	17-58						
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GR	2-36	143-187					
PVIF_SIVCZ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	20-58	150-193					
PVIF_SIVCZ	VIRION INFECTIVITY FACTOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS	1-42						
PVIF_SIVGB	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	1-39						
PVMP_HSVI1	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	85-134						
PVMP_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP)	148-183	333-369					
PVMP_VZVD	INTEGRAL MEMBRANE PROTEIN	HERPES VIRUS SAIMIRI (STRAIN 11)	80-129						
PVMT_SSVI	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-151	155-189	267-301				
PVI01_VACCC	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	85-130	138-172					
PVI01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56						
PVI01_VARV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56						
PVK01_VACCC	PROTEIN J1	VARIOLA VIRUS	22-56						
PVK01_VACCV	PROTEIN K3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-82						
PVK01_VACCV	PROTEIN K3	VACCINIA VIRUS (STRAIN WR)	38-82						
PVL01_VACCC	PROTEIN K7	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	115-149						
PVL02_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-81						
PVL02_VARV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	47-82						
PVL1_CRPVK	PROTEIN L2	VARIOLA VIRUS	47-81						
PVL1_FPVL	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	261-293	331-383					
PVL1_HPV05	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-90						
PVL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	335-393						
PVL1_HPV1A	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	336-392						
PVL1_HPV47	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	340-378						
PVL1_PAPVD	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	333-391						
PVL1_REOVD	PROBABLE L1 PROTEIN	DEER PAPILLOMAVIRUS	23-57						
PVL2_HPV05	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	94-142	433-471					
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE	341-373						
PVL2_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	336-392						
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	295-333						
PVL2_HPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	345-379						
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	288-326						
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	292-333						
PVL2_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	341-375						
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	293-333						
PVL3_REOVD	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	341-375						
PVL3_REOVJ	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	107-140	1112-1138					
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DJIONES)	1113-1178						
PVL96_IRVI	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	101-148	331-365	1112-1178				
PVM01_VACCC	L96 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	198-236					

FILIENE	ALLMOTIS	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
EIGENAAM	PROTEIN	VIRUS							
PVNAT_REOVL	PROTEIN NII	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-56						
PVNAT_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	397-321						
PVNAT_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-430	619-663					
PVNAT_REOVJ	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-430	618-662					
PVNAT_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DIVONES)	416-430	618-662					
PVNAT_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	416-430	618-662					
PVNAT_BRSVA	MAJOR NONSTRUCTURAL PROTEIN NU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	175-190	333-348	618-690				
PVNAT_HRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	42-90						
PVNAT_TRTV	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	42-90						
PVNAT_CDVO	MATRIX GLYCOPROTEIN M2	TURKEY RHINOTRACHEITIS VIRUS	36-70						
PVNAT_INCJJ	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	191-214						
PVNAT_NDVA	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN GUI/50)	131-149	151-208					
PVNAT_NDVD	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/1)	110-138						
PVNAT_PIJB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/48)	124-138						
PVNAT_PIJH4	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	99-113	204-218					
PVNAT_RADVA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NIH 47885)	99-113	204-218					
PVNAT_RADVC	MATRIX PROTEIN	RABIES VIRUS (STRAIN ALGO1)	69-103						
PVNAT_RADVE	MATRIX PROTEIN	RABIES VIRUS (STRAIN CVS-11)	69-103						
PVNAT_RABVN	MATRIX PROTEIN	RABIES VIRUS (STRAIN ERA)	69-103						
PVNAT_RABVP	MATRIX PROTEIN	RABIES VIRUS (STRAIN NISHIGAHARA RC-H)	69-103						
PVNAT_RABVS	MATRIX PROTEIN	RABIES VIRUS (STRAIN PV)	69-103						
PVNAT_SVNV	MATRIX PROTEIN	RABIES VIRUS (STRAIN SAD B19)	69-103						
PVNAT_VSVIG	MATRIX PROTEIN	SONCHUS YELLOW NET VIRUS	236-280						
PVNEI_CVDM	MATRIX PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C)	198-212						
PVNEI_CVPIS	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN NEBUS)	175-209						
PVNEI_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	98-146	212-257					
PVNEI_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	112-157						
PVNEI_CVIKE	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	112-157						
PVNEI_FIPV	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	38-62	175-209					
PVNEI_IBV6	E1 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	112-157						
PVNEI_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-55	171-218					
PVNEI_IBVBJ	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-55	171-218					
PVNEI_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE NI	21-55	171-218					
PVNEN_ENV	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8323)	172-218						
PVNIP_CAHVC	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	18-94						
PVNIP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	187-234	270-324					
PVNIP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	187-234	270-324					
PVNIP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DD/C)	187-234	270-324					
PVNIP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	187-234	270-324					
PVNIP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	187-234	270-324					
PVNIP_CERV	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	187-234	270-324					
PVNIP_FAVD	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	212-246						
PVNIP_SOCMV	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	117-151						
PVNIP_IDPDDB	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	76-110						
PVNSA_IDPDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S	132-313	324-361					
PVNSA_IDPDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	171-313	333-360					
PVNSA_IDPDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	214-335	289-333					
PVNSA_IDPGS	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S)	132-313	324-361					
PVNSA_IDPBIE	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	210-244						
PVNSA_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328						
PVNSA_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	208-242						
PVNSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	213-247						

PCGENE	ALLNUTIDS	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3
LUCSAVE	PROTEIN	VIRUS	1-10						
PVNSA_WNVH	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	213-247						
PVNSI_DHVH	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	213-247						
PVNSI_DHVH	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	201-233						
PVNSI_IAANN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	92-126	174-222					
PVNSI_IABAN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	92-126	174-222					
PVNSI_IACAO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/CAMEL/AUSONGOLIA/82)	92-126	174-222					
PVNSI_IAFOW	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50). AND (STR	92-126	174-222					
PVNSI_IAFPE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	92-126	174-222					
PVNSI_IAFPV	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	92-126	174-222					
PVNSI_IAHE1	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	92-126	174-222					
PVNSI_IAHJ1	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	92-126	174-222					
PVNSI_IAHNY	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	92-126	174-222					
PVNSI_IAHPE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PORT CHALMERS/1/73)	92-126	174-222					
PVNSI_IAPUE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	92-126	174-222					
PVNSI_IAUDO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	92-126	174-222					
PVNSI_IAWIL	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	92-126	174-222					
PVNSI_IAZJI	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	92-126	174-222					
PVNSI_INDAC	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTI	115-209						
PVNSI_INBLE	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	115-209						
PVNSI_INBSI	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	115-209						
PVNSI_INBAC	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	115-209						
PVNSI_INBAD	PROBABLE MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	132-184						
PVNSI_INBLE	PROBABLE MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	132-184						
PVNSI_INBSI	PROBABLE MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	132-184						
PVNSI_MYXVL	PROBABLE MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	132-184						
PVNSI_VACCC	M1 T1 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	46-80	145-197					
PVNSI_VACCV	PROTEIN N1	VACCINIA VIRUS (STRAIN COPENHAGEN)	64-111						
PVNSI_ROTBS	PROTEIN N1	VACCINIA VIRUS (STRAIN WR)	64-112						
PVNSI_ROTPC	NONSTRUCTURAL PROTEIN NS34	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-169						
PVNCA_AAV3	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-117	121-169					
PVNCA_RSV	DNA REPLICATION PROTEIN	ADENO-ASSOCIATED VIRUS 3	91-125	217-251					
PVNCN_PAVBD	MAJOR NONCAPSID PROTEIN	RUEC STRUPE VIRUS	129-163						
PVNCS_ADVG	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	221-255						
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	19-60	270-304					
PVNCS_JPVI9	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 001 002)	276-319	321-371	585-640	715-760	780-849		
PVNCS_MEVA	NONCAPSID PROTEIN NS-1	FELINE PANLEUKOPENIA VIRUS (STRAIN 193)	53-98						
PVNCS_MUMIN	NONCAPSID PROTEIN NS-1	MINK ENTERITIS VIRUS (STRAIN ADASHIRI)	53-98						
PVNCS_MUMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	35-91	261-297					
PVNCS_PAVBD	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	35-87	259-297					
PVNCS_PAVCN	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS	181-222						
PVNCS_PAVIB	NONCAPSID PROTEIN NS-1	CANINE PARVOVIRUS (STRAIN NI)	53-98						
PVNCS_PAVIH	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	216-270						
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS 111	35-76	259-297					
PVNSI_BTV10	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-77	169-210	109-146				
PVNSI_BTV17	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	107-141						
PVNSI_BTV1A	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	107-141						
PVNSI_BTV1S	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	107-141						
PVNSI_BTV30	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	107-141						
PVNSI_EIDV2	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 20 / ISOLATE AUSTRALIA)	107-141						
PVNSI_IAANN	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA)	401-454						
PVNSI_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	49-83						
PVNSI_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/83	37-71						

All Viruses (no bacteriophages)

FEATURE	ALLOWED FIS	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN									
PVNS1_IACKI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	49-81							
PVNS1_IADAJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/34)	46-80							
PVNS1_IADEI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	49-81							
PVNS1_IADEJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	46-80							
PVNS1_IADUJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	46-80							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	49-81							
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND (STRA	49-81							
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	49-81							
PVNS1_IALEI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	49-81							
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	49-81							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALLARD/ALBERTA/18/76	49-81							
PVNS1_IANAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALLARD/NEW YORK/6750/78)	49-81							
PVNS1_IANAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALLARD/NEW YORK/6774/78	49-81							
PVNS1_IANYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/AYNAI/HANEDA.THAI/76)	46-80							
PVNS1_IAPIO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79	49-81							
PVNS1_IAPII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	49-81							
PVNS1_IAPIJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/158/78	49-81							
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/158/79	49-81							
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	49-81							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETTLEHEM/GILL/71/4	49-81							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	49-81							
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	49-81							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61	46-80							
PVNS1_IAZII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	49-81							
PVNS1_INBAC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	49-81							
PVNS1_INBGA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	141-177							
PVNS1_INBIK	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/GA/86)	141-177							
PVNS1_INBIT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73), AND (STRAIN	141-177							
PVNS1_INBID	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ITI/84)	141-177							
PVNS1_INBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/JD/86)	141-177							
PVNS1_INBKD	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	141-177							
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	141-177	277-333						
PVNS1_INBRU	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	141-177							
PVNS1_INDSI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/RU/69)	139-175							
PVNS1_INBSJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	141-177							
PVNS1_INBVI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	141-177							
PVNS1_INBYA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/VICTORIA/87)	141-177							
PVNS2_AIISV9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	141-177							
PVNS2_BTVI7	NONSTRUCTURAL PROTEIN NS2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	67-101							
PVNS2_BTVIX	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	201-237							
PVNS2_CVMJH	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	201-237							
PVNS2_EIDV2	NONSTRUCTURAL PROTEIN NS2	MURINE CORONAVIRUS MHV (STRAIN JHM)	71-105							
PVNS2_IAALA	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	276-311							
PVNS2_IAANA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77), AND (STRAIN A/C	14-51							
PVNS2_IAANN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRINTAIL/69/76)	14-51							
PVNS2_IACIII	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60), AND (STRAIN	14-51							
PVNS2_IACKG	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	14-51							
PVNS2_IACKJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	14-51							
PVNS2_IADA2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/34)	11-90							
PVNS2_IADEI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	14-79							
PVNS2_IADUJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	11-90							
PVNS2_IAFOM	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	11-90							

PCGENE	ALLNUCTS	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	14-93					
PVNS1_IAFOR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	14-93					
PVNS1_IAFOR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	14-93					
PVNS1_IALE2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	14-93					
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	14-93					
PVNS1_IANA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/NALLARD/ALBERTA/18/76)	14-99					
PVNS1_IANA8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/NALLARD/ALBERTA/31/78)	14-99					
PVNS1_IANAN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/NALLARD/ALBERTA/31/78)	14-93					
PVNS1_IANAO	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/NALLARD/NEW YORK/6730/78)	14-93					
PVNS1_IANAN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/NALLARD/NEW YORK/6874/78)	14-93					
PVNS1_IAP10	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/NYNAU/INANEDA-TIIAU/76)	11-90					
PVNS1_IAP11	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	14-93					
PVNS1_IAP12	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/131/79)	14-39					
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	14-93					
PVNS1_IAPU0	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	14-93					
PVNS1_IATK8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/DIETHELHEIM-GLILI/71/	14-79					
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71	14-79					
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	11-53					
PVNS1_IAUS5	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	14-93					
PVNS1_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40	2-43	59-119				
PVNS1_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	2-43	59-119				
PVNS1_INCII	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/II/50)	17-98					
PVNS1_PVM	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	76-104					
PVNS1_AHSV3	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 3)	44-78	166-215				
PVNS1_AHSV9	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	37-78	88-112	166-215			
PVNS1_BRD	NONSTRUCTURAL PROTEIN NS3	BROADHAVEN VIRUS	76-98	102-147				
PVNS1_CVPFS	NONSTRUCTURAL PROTEIN NS3	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	11-53					
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 3-1	HUMAN CORONAVIRUS (STRAIN 229E)	11-53					
PVNS4_RSV	NONSTRUCTURAL PROTEIN 4	RICE STRIPE VIRUS	2-40					
PVNS1_CVCAE	NONSTRUCTURAL PROTEIN NS4	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-47					
PVNS1_CVFEI	NONSTRUCTURAL PROTEIN 3	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	11-47					
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	1-42					
PVNSC_CDVO	NONSTRUCTURAL PROTEIN 7	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	30-84	95-153				
PVNSC_MEASE	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN EDMONSTON)	43-84					
PVNSC_MEASI	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN IP-1, CA)	43-84					
PVNSC_MEASY	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN YAMAGATA-1)	43-84					
PVNSC_PIIIB	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	133-167					
PVNSC_PIIIC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	133-165					
PVNSC_PIIID	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C15773)	133-167					
PVNSC_PIIIE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C15773)	40-73	133-167				
PVNSC_PIIIH	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C15773)	38-133	161-199				
PVNSC_SEND5	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	133-167					
PVNSC_SEND1	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN 6/54)	133-165					
PVNSM_INSV	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN HARRIS)	133-167					
PVNST_BUNGE	NONSTRUCTURAL PROTEIN NS-A1	SENDAI VIRUS (STRAIN Z)	44-102	262-296				
PVNST_BUNCI	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS GERMISTON	34-75					
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE (ISOLATE L74)	5-39					
PVNST_BAGV	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	5-39					
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	BAGUARU VIRUS	35-69					
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS (TOS)	144-183					
PVNUA_PVKA	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS (UUK)	139-173					
PVNUC_DHVI	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	1134-1175					
PVNUC_EBOV	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	209-245					

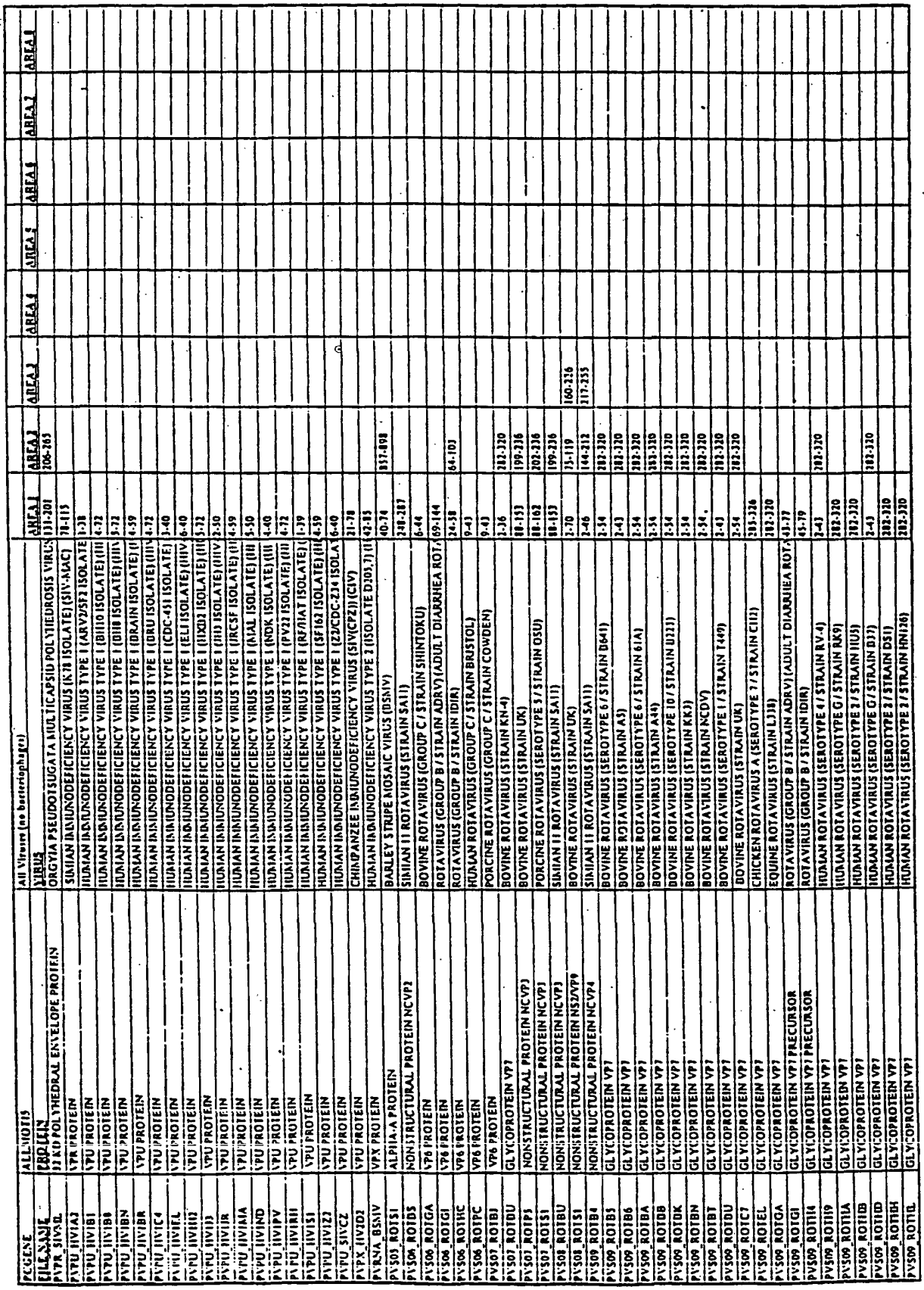
PCGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILESAVE	VIRUS	(91-725	227-261	119-169						
PVNUC_IAANA	PROTEIN NUCLEOPROTEIN	EBOLA VIRUS INFLUENZA A VIRUS (STRAIN ANAS ACUTA/PRI/80/6976)	1-42	96-134	337-408					
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	96-134	337-408					
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	1-42	96-134	337-408					
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	96-134	337-408					
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	1-42	96-134	337-408					
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	1-42	96-134	337-408					
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	1-42	96-134	337-408					
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80)	1-42	96-134	337-408					
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	1-42	96-134	337-408					
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	1-42	96-134	260-408					
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	1-42	96-134	337-408					
PVNUC_IADE3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	1-42	96-134	337-408					
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/73)	1-42	96-134	337-408					
PVNUC_IADKR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/KOREA/P1/53/74)	1-42	96-134	337-408					
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	1-42	96-134	337-408					
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	1-42	96-134	337-408					
PVNUC_IADU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	96-134	337-408						
PVNUC_IAEN1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1955)	1-42	337-409						
PVNUC_IAFON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	1-42	337-409						
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	337-408							
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/)	1-42	96-134	337-408					
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	96-134	260-408					
PVNUC_IAGKE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	112-134	337-408					
PVNUC_IAGUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLAMARYLAND/2/78)	1-42	337-408						
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLAMARYLAND/104/71)	96-134	337-409						
PVNUC_IAGUK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLAMARYLAND/1834/78)	1-42	96-134	337-409					
PVNUC_IAGUL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLAMARYLAND/1835/79)	1-42	96-134	337-409					
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLAMARYLAND/2178/79)	1-42	96-134	337-409					
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUILLAMASSACHUSETTS/1/80)	1-42	96-134	337-409					
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	1-42	96-134	337-409					
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLINI/1/89)	1-42	96-134	337-408					
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/1977)	1-42	96-134	337-408					
PVNUC_IAHM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/1963)	1-42	96-134						
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	1-42	337-409						
PVNUC_IAHO3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/3/83)	1-42	337-409						
PVNUC_IAIPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	96-134	337-408						
PVNUC_IAKTE	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-134	337-408					
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/19/79)	1-42	337-409						
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	1-42	337-409						
PVNUC_IANAN	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-134	337-408					
PVNUC_IANIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	1-42	96-134	337-408					
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	1-42	96-134	337-408					
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/76)	1-42	96-134	337-408					
PVNUC_IAOTJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	337-409						
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/01)	1-42	337-409						
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	1-42	96-134	337-408					
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	337-409						
PVNUC_IASEO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY	1-42	96-134	337-408					
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	1-42	96-134	337-408					
PVNUC_IASW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWEATWATER/AUSTRALIA/1/72)	1-42	337-408						

PCGENE	ALLHUI15	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
ELEMANE	PROTEIN	VIRUS								
PVNUC_IA1E1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	337-409						
PVNUC_IA1KN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	1-42	96-154	337-408					
PVNUC_IA1KO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	1-42	96-154	337-408					
PVNUC_IA1R5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	1-42	96-154	360-408					
PVNUC_IA1R7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	1-42	96-154	337-403					
PVNUC_IA1X7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKANA/KEN/1/72)	1-42	96-154						
PVNUC_IA1XD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	1-42	337-409						
PVNUC_IA1S5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	1-42	337-409						
PVNUC_IA1Y6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	1-42	337-408						
PVNUC_IA1VIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	337-408							
PVNUC_IA1VIP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/FAIANE/2318/84)	1-42	96-154	337-409					
PVNUC_IA1WIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/19/76)	1-42	96-154	337-408					
PVNUC_IA1W5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	1-42	337-409						
PVNUC_IA1Z9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/2532/88)	1-42	96-154	337-408					
PVNUC_IA241	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/39/73)	1-42	96-154	337-408					
PVNUC_IA2CA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/69)	1-42	96-154	337-408					
PVNUC_IA2DA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	1-42	337-409						
PVNUC_IA2GE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/81)	1-42	337-409						
PVNUC_IA2H1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	1-42	96-154	337-408					
PVNUC_IA2H3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	1-42	337-409						
PVNUC_IA2H4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	1-42	96-154	337-408					
PVNUC_IA2H5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/117/82)	1-42	96-154	337-408					
PVNUC_IA2I2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-41	96-154	337-408					
PVNUC_IA2I3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	1-42	96-154	337-408					
PVNUC_IA2J1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	1-42	96-154	337-408					
PVNUC_IA2J3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	1-42	96-154	337-408					
PVNUC_IA2J5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/72/79)	1-42	96-154	337-408					
PVNUC_IA2J6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1141/81)	1-42	96-154	337-408					
PVNUC_IA2J8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1639/89)	1-42	96-154	337-408					
PVNUC_IA2JA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JANESBURG/42)	1-42	96-154	337-408					
PVNUC_IA2MA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/74)	1-42	96-154	337-408					
PVNUC_IA2NE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	1-42	96-154	337-408					
PVNUC_IA2OH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/85)	1-42	96-154	337-408					
PVNUC_IA2ON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	1-42	96-154	337-408					
PVNUC_IA2TE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	1-42	96-154	337-408					
PVNUC_IA2W1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	1-42	96-154	337-408					
PVNUC_IA2W2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	1-42	96-154	337-408					
PVNUC_INBAA	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66)	15-142	480-514						
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	15-142	480-514						
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	15-145	480-514						
PVNUC_INBS1	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	15-146	480-514						
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	15-142	480-514						
PVNUC_NA3VM	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	93-203	406-447						
PVNUC_NA3VP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	173-207	322-407						
PVOD1_YACCC	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	173-207	322-407						
PVOD1_YARV	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	102-145	245-279	340-382	381-415				
PVOR1_FOVV	PROTEIN O1	VARIOLA VIRUS	102-145	245-279	340-382	381-415				
PVOR1_NMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	291-337							
PVOR1_PNSV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	1319-1373							
PVOR1_PVMR	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS (PMV)	1-39	299-337	1474-1532					
PVOR1_PVX	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	597-638	682-739						
PVOR1_PVXCP	165 KD PROTEIN	POTATO VIRUS X (PVX)	516-550							

PI GENE	ALL VIRUSES	All Viruses (no bacteriophage)							
GENANME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PVOR1_SNYEA	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP) (PVX)	510-547						
PVOR1_WCNVN	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYE	908-942	911-965					
PVOR1_WCNVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN NJ) (WCMV)	1240-1289						
PVP10_NPVAC	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN OJ) (WCMV)	1240-1289						
PVP10_NPVOP	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	37-41						
PVP10_RBSDV	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-30						
PVP10_RGDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	119-182	195-439	506-516				
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS (RGDV)	186-273						
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	220-334						
PVP11_WTV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS (RDV)	25-80	273-314					
PVP13_RDV	NONSTRUCTURAL PROTEIN PNS11	WOUND TUMOR VIRUS (WTV)	16-74						
PVP13_WTV	NONSTRUCTURAL PROTEIN P11	RICE DWARF VIRUS (RDV))	140-181						
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (WTV)	68-108						
PVP19_HSV1D	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	68-108						
PVP1_HCMVA	CAPSID ASSEMBLY AND DNA MATURATION PROTE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	189-231						
PVP21_HSV1G	PROBABLE CAPSID PROTEIN VP21	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-81	146-180					
PVP24_EBOV	PROBABLE CAPSID PROTEIN VP21	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	41-81						
PVP26_HSV1E	MEMBRANE-ASSOCIATED STRUCTURAL PROTEIN	EBOLA VIRUS	166-200						
PVP26_HSV1A	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	36-77						
PVP26_NPVOP	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	41-76						
PVP26_VZVD	P26 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	116-159						
PVP2_AHSV4	CAPSID PROTEIN VP26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	47-81						
PVP2_BIV10	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	136-188	270-304	410-465	614-662	684-720	976-1016	
PVP2_BIV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	108-235						
PVP2_BIV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	77-111	359-393					
PVP2_BTV15	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	77-111	188-209					
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-153	376-410	668-702				
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	72-106	241-301	405-451	461-493	895-919		
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	2-94	412-516	523-557	607-653	673-714		
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	2-94	483-517	524-558	608-656	676-715		
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	JUVENILE ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	17-97	492-526	533-567	617-658	685-764		
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	1-30	32-99	194-228	515-551	599-643	703-746	
PVP30_ASFE1	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	16-96	483-517	608-656	610-735			
PVP31_FRGIV	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75) (ASFV)	19-89						
PVP33_ASFB1	EARLY 33 KD PROTEIN	FROG VIRUS 3 (FV3)	227-261						
PVP35_EBOV	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	39-89						
PVP35_NPVAC	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	86-119						
PVP35_NPVBM	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	34-102						
PVP35_VACCC	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS (BMNPV)	34-102	224-258					
PVP35_VACCP	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	140-181						
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN L-IVP)	17-51						
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	140-181						
PVP35_AHSV4	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	141-183						
PVP3_BIV10	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	173-214	240-274	667-704				
PVP3_BTV11	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	114-155	653-694					
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	114-155	653-694					
PVP3_EHDV1	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA	214-255	653-694					
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	199-240	798-832	831-893				
PVP3_GFLV	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	200-246	733-770	798-832	831-893			
PVP3_RDV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS (GFLV)	96-133						
PVP3_ROTPC	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	299-337	817-852					
PVP3_ROTSI	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	24-58	229-263	329-395	406-446	640-688		

FEGENE	ALLNOTES	All Viruses (no bacteriophages)										
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVP40_EBV	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-76	244-278	331-385	451-492	662-696					
PVP40_HSV11	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	433-467									
PVP40_HSVEB	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	599-633									
PVP40_ILTVT	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	206-237									
PVP40_SCMVC	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V1B)	180-245									
PVP40_VZVD	CAPSID PROTEIN P40	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	1-35	309-337								
PVP41_APVAC	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAINS DUMAS) (VZV)	937-498									
PVP41_ROTSI	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	103-246	486-522								
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	102-166									
PVP4A_VACCC	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	484-518	528-630							
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-35	337-388	531-646							
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	355-389	518-563	794-828	837-891						
PVP4B_FOWPV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	363-396	518-563	794-828	833-891						
PVP4D_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	355-389	519-564	795-829	838-892						
PVP4D_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-145	296-330								
PVP4D_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	1-37	123-163	249-283							
PVP4_BTVID	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	1-37	123-163	249-281							
PVP4_BTVI1	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	379-417	619-653								
PVP4_BTVI3	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	369-407	609-643								
PVP4_BTVIA	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	369-407	609-643								
PVP4_NCDV	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	369-407	609-643								
PVP4_RDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	484-518	528-630								
PVP4_ROTBA	NONSTRUCTURAL PROTEIN PNS3	RICE DWARF VIRUS (RDV)	388-437	444-478	627-679							
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	1-35	112-146	338-370	484-518	528-633					
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	1-35	484-518	528-630							
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	1-35	112-146	338-370	484-518	528-633					
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	1-35	112-146	227-274	345-379	484-518	528-633				
PVP4_ROTHH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	117-151	476-519								
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	1-35	226-273	337-378	481-517	530-645					
PVP4_ROTHS	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	1-35	226-273	337-378	481-517	527-632					
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	1-33	112-146	227-274	338-379	484-518	531-646				
PVP4_ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN DS1)	1-35	226-273	337-378	481-517	527-633					
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	1-35	337-374	345-379	484-518	528-588					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	1-33	337-378	401-517	527-632						
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN N37)	1-35	226-273	337-378	481-517	527-632					
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN ACN11)	1-35	337-378	401-517	530-645						
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN P)	1-35	338-379	484-518	531-645						
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RAV)	1-35	226-273	337-378	481-517	527-632					
PVP4_ROTHY	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	1-35	226-273	337-378	481-517	530-644					
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN YAT0	1-35	227-273	344-378	481-517	527-632					
PVP4_ROTP3	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	1-33	227-273	344-378	481-517	527-651					
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	484-518	528-630							
PVP4_ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	0-40	127-161	241-278	293-334	530-634					
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	1-33	226-273	337-378	481-517	530-584	569-638				
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	1-35	113-146	227-274	484-518	528-630					
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	1-30	112-146	227-274	338-379	484-522	531-646				
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEN)	1-35	484-518	528-630							
PVP4_WTV	DE OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEN)	1-35	337-374	345-379	484-518	531-646					
PVP5_AHSV4	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	28-62	565-621								
PVP5_BRD	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC	7-58	113-229								
PVP5_BTVID	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	43-86	90-126								

PEGENE	ALLNOTES	All Viruses (no bacteriophages)									
GENENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP3_BIV11	OUTER CAPSID PROTEIN VP3	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	14-58	92-150	134-222	404-438				
PVP3_BIV11	OUTER CAPSID PROTEIN VP3	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	14-58	92-150	134-222	404-445				
PVP3_BIV13	OUTER CAPSID PROTEIN VP3	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	14-58	134-222	404-438					
PVP3_BIV1A	OUTER CAPSID PROTEIN VP3	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	14-58	92-143	148-222	404-438				
PVP3_BIV1S	OUTER CAPSID PROTEIN VP3	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-58	92-143	148-222	404-438				
PVP3_BIV2A	OUTER CAPSID PROTEIN VP3	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	14-58	92-222	404-438					
PVP3_EHDV1	OUTER CAPSID PROTEIN VP3	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	14-58	92-126	163-233	291-333	399-433			
PVP3_RDV	OUTER COAT PROTEIN P3	RICE DWARF VIRUS (RDV)	38-86	95-136	550-594					
PVP3_WTV	OUTER COAT PROTEIN P3	WOUND TUMOR VIRUS (WTV)	414-503	547-581	731-798					
PVP61_BIV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	183-215							
PVP61_NRDV	PROBABLE NONSTRUCTURAL 41.0 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (NRDV)	128-202							
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	39-96	151-186						
PVP61_BIV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	47-88	159-207	214-251					
PVP64_NPVOP	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	206-261	431-479						
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	289-364	443-477					
PVP6_BIV11	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GMN	206-281							
PVP6_BIV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	159-211							
PVP6_BIV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	159-211							
PVP6_BIV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	68-102	159-211						
PVP6_BIV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	12-78	163-211						
PVP6_BIV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	44-78	133-183						
PVP6_RDV	VP6 PROTEIN	RICE DWARF VIRUS (RDV)	110-191	296-344	360-401					
PVP6_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	144-178	286-334	400-434					
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	144-178	286-334						
PVP74_NPVAC	STRUCTURAL PROTEIN P6	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	183-456							
PVP74_NPVCF	P74 PROTEIN	CHORISTONEURA FUMIFERANA NUCLEAR POLYHEDROSIS VIRU	183-433							
PVP75_HSVSA	P74 PROTEIN	(HERPES TYPE 1 (STRAIN 17)	30-99	163-211	911-984					
PVP79_NPVAC	PROBABLE MEMBRANE ANTIGEN 35	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	363-397	406-440					
PVP7_BIV10	79 KD PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA) (SEROTYPE	184-228							
PVP7_BIV11	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	201-235							
PVP7_BIV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	184-228							
PVP7_BIV1A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	184-235							
PVP7_BIV1S	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	184-228							
PVP7_BIV2A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	184-228							
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	16-50	134-178						
PVP7_RDV	VP7 CORE PROTEIN	RICE DWARF VIRUS (RDV)	47-93	172-215						
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS3	WOUND TUMOR VIRUS (WTV)	47-84	193-241	458-495					
PVP80_NPVAC	NONSTRUCTURAL PROTEIN PNS3	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	7-51	99-142	158-204	231-298				
PVP81_NPVOP	CAPSID PROTEIN P80	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRU	80-102	410-451						
PVP8_BIV10	CAPSID PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	34-102	185-219						
PVP8_BIV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	34-102	185-219						
PVP8_BIV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	34-102	183-219						
PVP8_BIV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	34-102	185-219						
PVP8_BIV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	34-102	185-219						
PVP8_BIV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	34-102	185-219						
PVP8_BIV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	34-102	185-219						
PVP8_FOWPV	NONSTRUCTURAL PROTEIN P8	FOWLPOX VIRUS	193-245							
PVP9_RDV	STRUCTURAL PROTEIN VP9 PRECURSOR	RICE DWARF VIRUS (RDV)	13-47	186-226						
PVP9_WTV	NONSTRUCTURAL PROTEIN PNS9	WOUND TUMOR VIRUS (WTV)	140-212							
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	140-212							
PVPG_BVDV1	STRUCTURAL PROTEIN P9	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	25-59							
PVPHE_NPVAC	PUTATIVE GENOME-LINKED PROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	146-233							
PVPHE_NPVOP	39 KD POLYHEDRAL ENVELOPE PROTEIN									



GENE NAME	ALL HOITS	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
GENE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PVPR_SIVGL	33 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	131-201	206-265					
PVPR_SIVAG	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	78-115						
PVPU_HIVIA2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV/SF2 ISOLATE	1-38						
PVPU_HIVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (II	4-72						
PVPU_HIVIB0	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (III	5-72						
PVPU_HIVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (I	4-59						
PVPU_HIVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (III	4-72						
PVPU_HIVIC4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-40						
PVPU_HIVIEL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (III	6-40						
PVPU_HIVIH2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (III	5-72						
PVPU_HIVIJ1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (J10 ISOLATE) (III	2-50						
PVPU_HIVIJR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE) (II	4-59						
PVPU_HIVIMA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (III	5-50						
PVPU_HIVIND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (III	4-40						
PVPU_HIVIPV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (III	4-72						
PVPU_HIVIRH	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (	1-39						
PVPU_HIVIS1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE) (III	4-59						
PVPU_HIVIZ2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	6-40						
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ2)) (CIV)	21-78						
PVPX_HIVID2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7) (I	42-85						
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-74	857-898					
PVS01_ROTSI	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	208-287						
PVS06_ROTDS	VP8 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-44						
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	69-144						
PVS06_ROTHC	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	24-58	64-103					
PVS06_ROTPC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	9-43						
PVS07_ROTBJ	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-43						
PVS07_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	2-36	282-320					
PVS07_ROTP1	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	88-153	199-236					
PVS07_ROTS1	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	88-162	202-236					
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	88-153	199-236					
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NS2/VP9	BOVINE ROTAVIRUS (STRAIN UK)	2-70	73-119	160-236				
PVS09_ROTB4	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-46	144-212	217-255				
PVS09_ROTB5	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-54	282-320					
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-43	282-320					
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	2-54	282-320					
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	2-54	282-320					
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN U222)	2-54	282-320					
PVS09_ROTBN	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK)	2-54	282-320					
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN NCDV)	2-54	282-320					
PVS09_ROTDU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	2-43	282-320					
PVS09_ROTC7	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-54	282-320					
PVS09_ROTEL	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	315-326						
PVS09_ROTGA	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	282-320						
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	43-77						
PVS09_ROTIH	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	45-79						
PVS09_ROTII9	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-43	282-320					
PVS09_ROTIIA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN AK9)	282-320						
PVS09_ROTIIB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN IIU3)	282-320						
PVS09_ROTIID	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN D1)	2-43	282-320					
PVS09_ROTIIH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	282-320						
PVS09_ROTIIL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	282-320						

GENE	ALLNOTES	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
ELLMAN	PROTEIN	VIRUS						
PVS09_ROTIGT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	1-35	282-320				
PVS09_ROTIGT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN KU1)	2-43	282-320				
PVS09_ROTIID	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-43	282-320				
PVS09_ROTIIP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN P)	282-320					
PVS09_ROTIIR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	282-320					
PVS09_ROTIIS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	282-320					
PVS09_ROTIIT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	18-56	208-242	282-320			
PVS09_ROTIIV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	18-56	208-242	282-320			
PVS09_ROTIIW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-43	282-320				
PVS09_ROTP2	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	282-320					
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	282-320					
PVS09_ROTP4	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN OSU)	3-56	208-242	282-320			
PVS09_ROTP5	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	282-320					
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	282-320					
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN DEN-144)	18-56	208-242	282-320			
PVS09_ROTPK	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN K)	18-56	208-242	282-320			
PVS09_ROTPN1	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BAH-1)	18-56	208-242	282-320			
PVS09_ROTPY	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN YM)	1-35	282-320				
PVS09_ROTRH	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	282-320					
PVS09_ROTS1	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	282-320					
PVS10_ROTBN	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN NCDV)	77-161					
PVS10_ROTB5	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	17-58					
PVS10_ROTBU	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	77-161					
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A28)	77-162					
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	77-161					
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6)	77-162					
PVS10_ROTH1C	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	131-158					
PVS10_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	77-138					
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	77-163					
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTA	24-63	96-130				
PVS11_ROTGI	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	9-68					
PVS11_ROTH5	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	100-143					
PVS11_ROTH6	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	107-144					
PVS11_ROTHB	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE G1 / STRAIN B37)	107-144					
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	111-145					
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145					
PVS11_ROTS1	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-145					
PVS48_TBRVC	MINOR OUTER CAPSID PROTEIN	TOMATO BLACK RING VIRUS (STRAIN C) (TBRV)	217-265					
PVS11_NUNP2	SATELLITE RNA 48 KD PROTEIN	NUNPS VIRUS (STRAIN SDL-1), AND NUNPS VIRUS (STRAIN SDL	9-46					
PVS11_NUNP4	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN EDINGBURGH 2), AND (STRAIN EDINGB	13-47					
PVS11_NUNPA	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN EDINGBURGH 4)	13-47					
PVS11_NUNPB	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN MATSUYAMA)	13-51					
PVS11_NUNPE	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN DELFAST)	13-53					
PVS11_NUNPJ	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN ENDERS)	9-46					
PVS11_NUNPK	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN JERYL-LYNN)	9-46					
PVS11_NUNPL	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN KILHAM)	9-51					
PVS11_NUNPM	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN BRISTOL 1)	13-55					
PVS11_NUNPT	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN MIYAHARA VACCINE)	17-51					
PVS11_NUNPU	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN TAKAHASHI)	13-47					
PVS11_REOVD	SMALL HYDROPHOBIC PROTEIN	NUNPS VIRUS (STRAIN URABE VACCINE AM9)	13-47					
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	8-122	123-173	222-259			
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN D5/JONES)	1-178					

PCGENE	ALLBIOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
[illegible]	PROTEIN	VIRUS							
PVS12_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	3-107	112-198					
PVS12_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-384						
PVS12_REOVL	SIGMA 2 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	330-384						
PVS15_REOVD	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	85-119						
PVS15_REOVJ	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 2 / STRAIN JONES)	7-45						
PVS12_HEVDU	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN DURMA) (HEV)	318-352						
PVS12_HEVME	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	317-351						
PVS12_HEVMY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	318-352						
PVS12_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	318-352						
PVS12_HEVRH	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (ISOLATE ROESUS)(HEV)	186-220						
PVT1A_CAPVI	STRUCTURAL PROTEIN 2	CAPRIPOXVIRUS (STRAIN INS-1)	120-158						
PVT4_CAPVI	PROTEIN TJA	CAPRIPOXVIRUS (STRAIN INS-1)	86-120						
PVT4_CAPVK	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	86-120						
PVT1ER_EBV	T4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	235-290	595-639					
PVT1ER_ICHVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	413-451	617-651					
PVT1ER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	468-502						
PVT1ER_HSVED	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	11-45						
PVT1ER_HSVSI	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	98-136	698-744					
PVT1ER_HSVSA	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	226-267						
PVT1ER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	588-622						
PVV_PIAIA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	4-38						
PVY1_SENDS	V1 PROTEIN	SENDAI VIRUS (STRAIN 6/94)	104-138						
PY108_SSV1	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-80						
PY110_SSV1	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-45						
PY119_SSV1	HYPOTHETICAL 11.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	55-89						
PY11K_TYDVA	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	10-96						
PY11K_FCVC6	HYPOTHETICAL 11.3 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	53-87						
PY12K_FCVF9	HYPOTHETICAL 12.2 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI68 FINTI) (FCV)	4-38						
PY12K_RUDV	HYPOTHETICAL 12.1 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	4-38						
PY12K_RUDVJ	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEI	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV)	11-50						
PY12K_CLVK	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351) (RHDV)	13-50						
PY13K_CLVN	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYA 144)	46-97						
PY13K_NPVOP	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	43-81						
PY13K_SSV1	HYPOTHETICAL 10.1 KD PROTEIN IN 19 KD PROTEIN	ORGYIA PSEUDOTSUGATA NUCLEOCAPSID POLYHEDROSIS VIRUS	16-67						
PY14K_SSV1	HYPOTHETICAL 13.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	2-36	63-96					
PY160_ADE07	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39						
PY16K_SSV1	HYPOTHETICAL PROTEIN C-168	HUMAN ADENOVIRUS TYPE 3	119-166						
PY17K_SSV1	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-35	77-111					
PY18K_SSV1	HYPOTHETICAL 17.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-43	119-153					
PY18K_SSV1	HYPOTHETICAL 18.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	102-136						
PY20K_SSV1	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-107						
PY23K_SSV1	HYPOTHETICAL 23.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	127-180						
PY3_SOCAV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	117-154						
PY31K_SSV1	HYPOTHETICAL 31.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	3-97	100-141					
PY31K_SSV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	230-278						
PY31K_NPVAC	HYPOTHETICAL 31.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	122-241						
PY3_SOCHV	HYPOTHETICAL 33.7 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	115-149						
PY3K9_SSV1	HYPOTHETICAL PROTEIN 3	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-31						
PY3_SOCHV	HYPOTHETICAL 3.9 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	36-94						
PY3K_SSV1	HYPOTHETICAL PROTEIN 7	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-125	503-537	546-587	658-700			
PY4_SOCHV	HYPOTHETICAL 83.7 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	46-83						
PY804_FOWPA1	HYPOTHETICAL PROTEIN 8	FOWLPOX VIRUS (ISOLATE TP-438) (MUNICH)	74-115	184-221					
PY804_FOWPA1	HYPOTHETICAL BAMHII-ORF1 PROTEIN								

PECIES	ALLNOTES	All Viruses (no bacteriophage)							
ENENAME	PROTEINS	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PYDO5_FOWPN	HYPOTHETICAL BAMHI ORF4 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	29-70						
PYDO5_FOWPN	HYPOTHETICAL BAMHI ORF3 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	137-[illegible]	61-95					
PYDO6_FOWPN	HYPOTHETICAL BAMHI ORF6 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	115-149						
PYDO7_FOWPN	HYPOTHETICAL BAMHI ORF6 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	244-279						
PYDI0_FOWPN	HYPOTHETICAL BAMHI ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	192-233						
PYDI2_FOWPN	HYPOTHETICAL BAMHI ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	4-47	111-153					
PYDI3_FOWPN	HYPOTHETICAL BAMHI ORF11 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-418[MUNICH])	122-163						
PYDL2_EBV	HYPOTHETICAL BAMHI ORF11 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	418-306						
PYDH1_HSV57	HYPOTHETICAL BDLF3 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 484-77)	147-188						
PYF10_FOWPI	HYPOTHETICAL 14.1 KD PROTEIN IN DIFFR 3 REGION	FOWLPOX VIRUS (STRAIN FP-1)	160-204						
PYGA1_HSV3AB	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	176-211						
PYGA1_HSV3AM	HYPOTHETICAL 33.6 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN DC-10)(MDIV)	176-211						
PYH12_VACCV	HYPOTHETICAL 33.6 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)(MDIV)	34-78	93-139					
PYH13_VACCV	HYPOTHETICAL 21.7 KD HINDIII-C PROTEIN	VACCINIA VIRUS (STRAIN WR)	24-58	191-222					
PYKR4_EBV	HYPOTHETICAL HOST RANGE 37.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	16-58						
PYLI5_ADE41	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	39-81						
PYLR2_EBV	HYPOTHETICAL 13.4 KD PROTEIN IN 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	64-125						
PYOR1_COYAV	HYPOTHETICAL BLRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	94-147						
PYOR3_COYAV	HYPOTHETICAL 33 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYAV)	33-77						
PYOR3_LELV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYAV)	106-134						
PYOR3_TTV1	HYPOTHETICAL 28.4 KD PROTEIN	LELYSTAD VIRUS (LV)	16-54						
PYOR5_ADEGI	HYPOTHETICAL 69 KD PROTEIN	THERANIPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	70-127						
PYORA_TTV1	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS)(FOWL ADENOVIRU	21-67						
PYORD_TTV1	HYPOTHETICAL 9.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	6-51	69-110					
PYORE_TTV1	HYPOTHETICAL 15.4 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	78-122						
PYORG_TTV1	HYPOTHETICAL 13.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	1-45						
PYORQ_TTV1	HYPOTHETICAL 26.6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	1-43						
PYORT_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	4-38	231-315					
PYORW_TTV1	HYPOTHETICAL 18.7 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)(TTV1)	4-49						
PYP12_RTBV	HYPOTHETICAL 12.1 KD PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	33-72						
PYP13_RTBVP	HYPOTHETICAL P13 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTB	33-72						
PYP14_RTBV	HYPOTHETICAL P14 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	31-101	106-137					
PYP46_RTBV	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	31-101	106-137					
PYP46_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	49-111	197-231					
PYP63_NPVAC	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	49-111	197-231					
PYP7A_TNVA	HYPOTHETICAL PROTEIN IN P6.5 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	32-73						
PYP0II_NPVAC	HYPOTHETICAL P7A PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	1-65						
PYP0L_JPNV1	HYPOTHETICAL 21.6 KD PROTEIN IN POLYHEDRIN 5	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	116-153						
PYQ1_ANEPV	HYPOTHETICAL 17.3 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	23-66						
PYQ3_ANEPV	HYPOTHETICAL 7.6 KD PROTEIN IN TK 5'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	9-61						
PYRF1_HSV6G	HYPOTHETICAL PROTEIN IN TK 3'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	1-57	62-96	149-183				
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	193-264						
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	114-175						
PYRP2_IRV6	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	233-286	404-443					
PYRR1_EBV	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYP	1-45						
PYSR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	96-130						
PYTR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	94-177						
PYUB1_NPVOP	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	190-424						
PYVAC_VACCC	HYPOTHETICAL 24.0 KD PROTEIN IN UBIQUITIN 3'RE	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	33-69	176-204					
PYVAG_VACCC	HYPOTHETICAL 14.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-63						
PYVAH_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-37						
PYVAM_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	78-112						

PGENE	ALL3107.15	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PYVBH_VACCC	HYPOTHETICAL 19 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-57							
PYVBI_VACCC	HYPOTHETICAL 14 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-39							
PYVCC_VACCC	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-48							
PYVDD_VACCC	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-80							
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-80							
PYVDC_VACCV	HYPOTHETICAL 7.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	7-41							
PYVGD_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-51							
PYVIIA_VACCC	HYPOTHETICAL 8.1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	9-53							

TABLE VI

107 X 178 X 4 SEARCH RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

FOR ILLUSTRATIVE PURPOSES ONLY

PCGENE	107a1764	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2	AREA 2	AREA 2
P194K_TRVSV	POT 194 KD PRO	TOBACCO RATTLE VIRUS (STRAIN STN)	183-414	1087-1114	1142-1169					
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133							
PAANT_HDVD3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133							
PAANT_HDVIT	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133							
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133							
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133						
PAANT_HDVS3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133						
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133							
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	72-106							
PATIL_VACCV	94 KD A-TYPE INCLUSION PRO	VACCINIA VIRUS (STRAIN WR)	14-36	67-94	424-452	570-625				
PATIL_VARV	81 KD A-TYPE INCLUSION PRO	VARIOLA VIRUS	67-94	423-504	571-605					
PATIO_H3V11	ALPHA TRANS-IND FACTOR 78 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	308-335							
PATIO_H3V1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	308-335							
PATIO_H3VEB	ALPHA TRANS-IND FACTOR 81 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	294-321							
PATIR_H3VEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	235-289							
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-36	67-94	426-478	572-620	1137-1161	914-990	1234-1261	
PBELF_EBV	BILF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220							
PCAIH_VACCC	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	84-111	117-144						
PCAIH_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	84-111	117-144						
PCAJH_VARV	CELL SURFACE-BINDING PROTEIN	VARIOLA VIRUS	84-111	117-144						
PCELF_H3V5A	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	312-339							
PCGHJ_H3V5A	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	127-154							
PCOAI_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	139-186							
PCOAJ_BFDV	COAT PROTEIN VP3	BUDGERIGAR FLEDGLING DISEASE VIRUS	160-187							
PCOAJ_POVBO	COAT PROTEIN VP1	BOVINE POLYOMAVIRUS	49-76							
PCOAJ_POVJC	COAT PROTEIN VP1	POLYOMAVIRUS JC	37-64							
PCOAJ_POVLY	COAT PROTEIN VP1	LYMPHOTROPIC POLYOMAVIRUS	170-204							
PCOAJ_POVMK	COAT PROTEIN VP1	MOUSE POLYOMAVIRUS (STRAIN KILLIAN)	22-49							
PCOAJ_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	178-205							
PCOAJ_AAV3	PROBABLE COAT PROTEIN 3	ADENO-ASSOCIATED VIRUS 3	120-147							
PCOAJ_TTV1	COAT PROTEIN VP1	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-30							
PCOAT_ADVG	COAT PROTEIN VP1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	194-221							
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	96-123							
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	63-90	191-220	461-488					
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	64-91	194-221						
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	63-90	191-220						
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	63-90	192-219	461-488					
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	64-91	194-221						
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	16-43							
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	41-46							
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	338-362							
PCOAT_CSMV	COAT PROTEIN	CHLORUS STRIATE MOSAIC VIRUS	62-89							
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	170-200							
PCOAT_FCVC6	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	566-600							
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	316-343	566-600						
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	319-346	569-603						
PCOAT_FMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	220-247	338-383						
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	221-260	246-273						
PCOAT_MOSV	COAT PROTEIN	MUSCANTHUS STREAK VIRUS	139-166							
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	106-133							
PCOAT_PAVIB	PROBABLE COAT PROTEIN VP1	HUMAN PARVOVIRUS B19	324-351	369-396						
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS (ISOLATE ATCC PV211)	46-73							
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	138-162							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	21-48							
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	23-50							
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN B5-2)	3-30	41-68						
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	97-124							

PCGENE	[07a17ba4	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILE_NAME	PROTEIN	VIRUS								
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	272-339							
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	104-131							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	104-131							
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	78-132							
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAIJLEMENSE)	104-131							
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	104-131							
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O and KOKUBU)	104-131							
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	104-131							
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO L)	104-131							
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	90-117							
PCOAT_TRVPS	COAT PROTEIN	TOBACCO RATTLE VIRUS (STRAINS PSG and PLB)	148-145							
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	18-37							
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-68							
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	41-68							
PDNBJ_ADE01	EARLY E1A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 7	46-73							
PDNBJ_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068						
PDNBJ_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-464							
PDNBJ_HSV5A	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	333-368	512-539						
PDNBJ_MCMV5	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-618							
PDNBJ_POVJC	DNA-BINDING PROTEIN	POLYOMAVIRUS JC	2-29							
PDNBJ_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	435-462	512-559						
PDNLI_VACCC	DNA LIGASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-131	172-199	330-383					
PDNLI_VACCV	DNA LIGASE	VACCINIA VIRUS (STRAIN WR)	104-131	172-199	359-385					
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	104-131	172-199	358-385					
PDPOL_ADE13	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	403-431							
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	21-64	202-240						
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	338-365							
PDPOL_CIVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	338-365							
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	170-216	621-653	722-769				
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	333-380							
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 53)	5-39							
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39							
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE 51)	5-39	304-331						
PDPOL_HPBG5	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325							
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	1-39							
PDPOL_HPBV5	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PDV/3791)	436-483							
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	443-470							
PDPOL_HSV11	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	728-766	770-797						
PDPOL_HSV5A	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	611-652							
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	398-443							
PDPOL_NPVLD	DNA POLYMERASE	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	357-384							
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	776-797							
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	770-797							
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	769-796							
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326							
PDPOL_WHV39	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 39	290-331							
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-242	290-331						
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	289-310						
PDPOL_WHV81	DNA POLYMERASE8	WOODCHUCK HEPATITIS VIRUS 8	212-242	290-331						
PDTOX_CORBE	DIPHTHERIA TOXIN HOMOLOG CRM228 PREC	CORYNEPHAGE BETA	316-533							
PDTX_CORBE	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE BETA	533-560							
PDTX_CORON	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE OMEGA	516-533							
PDUT_HSV1A	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117							
PDUT_HSV5A	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	179-211							
PEIBL_ADE07	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 7	126-153							
PEIBL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	126-163							
PEIBS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	3-30							

PCGENE		All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS								
PE1B5_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	112-173							
PE1J4_ADE02	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	3-39							
PE1J4_ADE07	EARLY E1B 15.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	21-48							
PE1J0_ADE01	EARLY E1B 20.1 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 1	3-32	78-100						
PE1J0_ADE05	EARLY E1B 20.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	78-107							
PE1J1_ADE05	EARLY E1B 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	125-161							
PE1GL_ADEM1	EARLY E1B 17.7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	38-66							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN [illegible])	15-82							
PEF1_VARV	EARLY TRANSFACTOR 70 KD SUBUNIT	VARIOLA VIRUS	307-341	470-497						
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	420-468							
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	6-33	426-474						
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	395-432							
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-44	544-603	631-695					
PENV_BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	573-632	660-724					
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-337							
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-337							
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-337							
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	311-377							
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB39)	304-337							
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-337							
PENV_CAEVC	ENV POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	165-192							
PENV_EIAV1	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-1)	668-713							
PENV_EIAV2	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-2)	668-695							
PENV_EIAV3	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-3)	668-712							
PENV_EIAV5	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-5)	669-696							
PENV_EIAV9	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	668-712							
PENV_EIAVC	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL32)	668-712							
PENV_EIAVW	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSUS)	668-712							
PENV_EIAVY	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	668-712							
PENV_FENV1	ENV POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	33-60	517-544						
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	619-680	722-749						
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	619-668	720-747						
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-679	721-748						
PENV_FLVC6	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	109-138							
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519							
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510-539							
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516							
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	11-41	318-353	866-893					
PENV_FSVGA	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	510-539							
PENV_FSVGB	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GA)	490-519							
PENV_FSVSM	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN SM)	493-522	522-564						
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203							
PENV_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	342-376							
PENV_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	342-376							
PENV_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	342-376							
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-370							
PENV_HVIA2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	544-592	630-682	790-825					
PENV_HVIB1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	545-594	631-683	791-818					
PENV_HVIB8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	540-589	626-678	786-813					
PENV_HVIBN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	287-394	338-365	562-590	628-679	787-813			
PENV_HVIBR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	530-599	636-688	796-823					
PENV_HVIC4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	397-424	537-606	641-695	803-835				
PENV_HVIEL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	255-296	386-413	543-591	628-680				
PENV_HVIH2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	545-594	631-683	791-818					
PENV_HVIHD	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	545-594	631-683	791-818					
PENV_HVIIS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIS ISOLATE)	336-377	536-605	642-694	803-839				
PENV_HVIJR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	336-383	622-675	783-811					

PCGENE	10711784	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	274-301	555-596	621-671	776-824					
PENV_HVHKB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP33)	347-395	693-767	794-836						
PENV_HVHMA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	343-392	629-681	789-836						
PENV_HVHAF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MEA ISOLATE)	343-390	563-595	632-684	791-839					
PENV_HVHAN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	326-360								
PENV_HVHNS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	349-390	536-583	621-673	781-833					
PENV_HVHND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	344-393	630-704	789-830						
PENV_HVHOY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	345-394	631-683	791-838						
PENV_HVHPV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	345-394	551-578	534-602	640-692	800-837				
PENV_HVHRJ1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	280-307	536-585	622-674	782-809					
PENV_HVHS1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	633-679	783-835						
PENV_HVHSF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF2) ISOLATE)	341-389	538-585	645-693	611-681					
PENV_HVHSC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	545-593	611-681	791-838					
PENV_HVHWI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJI ISOLATE)	334-361	536-584	622-674	782-809					
PENV_HVHW2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	335-396	542-591	618-680	790-820					
PENV_HVH22	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2Z6DC.2.14 ISOLATE)	251-292								
PENV_HVHZ3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	336-393	545-593	610-662	792-822					
PENV_HVHZ6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	286-307	533-601	634-686	797-828					
PENV_HVHZ8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	345-394	627-666	791-823						
PENV_HVHZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ2/3 ISOLATE)	331-388	533-591	631-688	631-697					
PENV_HVHBE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	534-593	623-650	635-699					
PENV_HVHCA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM3)	61-88	533-590	535-582	644-698					
PENV_HVHD1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	60-87	524-581	536-583	645-693					
PENV_HVHGI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	61-88	524-581	536-583	663-689					
PENV_HVHNZ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	58-85	533-592	622-698						
PENV_HVHRO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	442-476	527-554	539-586	648-682					
PENV_HVH2A	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24 IC-02)	553-584	614-631							
PENV_HVH2B	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	539-586	648-692					
PENV_MCF	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	471-512								
PENV_MCF13	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-1)	488-515								
PENV_MLVAV	ENV POLYPROTEIN	ABV MURINE LEUKEMIA VIRUS	517-564								
PENV_MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	510-539								
PENV_MLVF3	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	533-553								
PENV_MLVFF	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	533-553								
PENV_MLVF7	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	533-553								
PENV_MLVHO	ENV POLYPROTEIN	HOMOLV MURINE LEUKEMIA VIRUS	510-540								
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
PENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	502-543								
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	458-485	562-589							
PENV_MMTVG	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	458-485	562-589							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	422-470								
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	151-84								
PENV_OMVV3	ENV POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	42-69	195-223	780-807						
PENV_RAVCV	ENV POLYPROTEIN	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	487-517								
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	14-41	866-901							
PENV_SFVL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK1)	18-45	319-357	677-700	863-898					
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	369-310	561-588	592-619	632-679	697-724				
PENV_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	270-301	566-593	597-624	658-685	703-730				
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	257-291	536-582	548-601	634-708					
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	1-30	268-298	590-617	631-678					
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	553-589	636-666	726-784	627-654				
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	8-35	538-585	589-630	734-816					
PENV_SIVM1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	120-150	550-609	671-715						
PENV_SIVMQ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	136-215	577-589							
PENV_SIVMK	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE ISOLATE)	553-608								

PCGENE	1997178t4	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	549-601								
PENV_SIVML	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	281-308	353-612	642-669	691-718					
PENV_SIVS4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (FJ16/SMH4 ISOLATE)	286-313	354-595	646-722						
PENV_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	400-468								
PENV_SMRV1I	ENV POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-1F)	409-471								
PENV_SRV1	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	22-62	773-800							
PENV_VILV	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-62	780-807							
PENV_VILV1	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 7/CLONE LV1-1KS1)	22-62	782-809							
PENV_VILV2	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 7/CLONE LV1-1KS2)									
PETF1_FOWP1	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	190-228								
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	106-140	469-496	550-587						
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	307-341	478-497							
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	307-341	470-497							
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-97	174-210	302-332						
PETF2_VACV	EARLY TRANSCRIPTION FACTOR 82	VARIOLA VIRUS	66-97	174-210	302-332						
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-139								
PFIB2_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	179-217								
PFIB2_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	178-216								
PFIBP_ADE02	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 2	308-335								
PFIBP_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	324-351	446-473							
PFIBP_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	339-366	461-488							
PFIBP_ADEBJ	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	118-145	164-191							
PFIBP_ADEM1	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	275-305	325-352							
PFOSX_M5VFR	V-FOS/FOX TRANSFORMING PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	138-169								
PFOS_AVONK	P35-V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK14	118-147								
PFOS_M5VFB	P35-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	162-193								
PGAG_AVISM	GAG POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	210-297								
PGAG_EIAYY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	144-171								
PGAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	621-648								
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	396-443	447-474							
PGAG_HIV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	91-118								
PGAG_HIV1J	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	91-118								
PGAG_HIV1N	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NP ISOLATE)	87-118								
PGAG_HIV1BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
PGAG_HIV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
PGAG_HIV2NZ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	88-115								
PGAG_HIV2S1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
PGAG_DHA	RETROVIRUS-RELATED GAG POLYPROTEI	HAMSTER INTRACISTERNAL A-PARTICLE	270-297								
PGAG_DMA	RETROVIRUS-RELATED GAG POLYPROTEI	MOUSE INTRACISTERNAL A-PARTICLE	33-60	69-103	232-259						
PGAG_DMAE	RETROVIRUS-RELATED GAG POLYPROTEI	MOUSE INTRACISTERNAL A-PARTICLE	96-130								
PGAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	84-131	156-187							
PGAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	84-116								
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	84-131	156-187							
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	222-260								
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	497-531	614-651							
PGAG_SIVAJ	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	473-507								
PGAG_SIVAK	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (KAW ISOLATE)	88-115								
PGAG_SIVMS	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115								
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (FJ16/SMH4 ISOLATE)	88-115								
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	88-115								
PGAG_SMSAV	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	397-443								
PGAG_SRV1	GAG POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	223-261								
PHEL1_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	331-348							
PHEL1_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	418-449								
PHEL1_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728							
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	208-242								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-242								
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-242								

PCGENE	10741784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PIEMA_CVBQ	IIEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	208-342								
PIEMA_CVIOC	IIEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	208-342								
PIEMA_IAAIC	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	387-453								
PIEMA_IABAN	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	34-51	371-437							
PIEMA_IABUD	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	381-451								
PIEMA_IACAO	IIEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/CANBERRA/ORIGINAL/82)	9-76								
PIEMA_IACKA	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	381-451								
PIEMA_IACKG	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-58	382-441	494-528						
PIEMA_IACKQ	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	396-426								
PIEMA_IACKV	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/13709/81)	396-426								
PIEMA_IADA1	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	118-146	384-443							
PIEMA_IADA2	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	381-451								
PIEMA_IADA3	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	433-453	499-543							
PIEMA_IADA3	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	381-453								
PIEMA_IADA4	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	29-56	418-478							
PIEMA_IADCZ	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAK/1/56)	381-451		506-533						
PIEMA_IADE1	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-53	402-453							
PIEMA_IADH1	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/3/77)	371-437								
PIEMA_IADH2	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	371-437								
PIEMA_IADH3	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	371-437								
PIEMA_IADH4	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/81)	371-437								
PIEMA_IADH5	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	371-437								
PIEMA_IADH6	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/83)	371-437								
PIEMA_IADH7	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	371-437								
PIEMA_IADIR	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/81)	413-445								
PIEMA_IADM2	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76)	21-56								
PIEMA_IADM2	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/59/78/74)	381-453								
PIEMA_IADMA	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	31-58								
PIEMA_IADNY	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/1/78)	21-53								
PIEMA_IADNZ	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/3/76)	381-451								
PIEMA_IADU1	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	21-55								
PIEMA_IAEN6	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	387-453								
PIEMA_IAEN7	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/878/69)	24-51								
PIEMA_IAFPR	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/931/71)	40-67	387-453							
PIEMA_IAGRE	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	177-221	384-442							
PIEMA_IAGU3	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	381-451								
PIEMA_IAGUA	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	505-532								
PIEMA_IAHAL	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/223/84)	504-531								
PIEMA_IAIAR	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HUMAN/1/68)	386-452								
PIEMA_IAIC6	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/CAMBRIDGE/1/63)	39-56								
PIEMA_IAIC7	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/CAMBRIDGE/1/71)	39-56	194-221	388-457						
PIEMA_IAIC7	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/CAMBRIDGE/1/71)	39-56	194-221	388-457						
PIEMA_IAIC8	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/C DETROIT/1/64)	39-56	194-221	388-457						
PIEMA_IAIDE	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/DETROIT/1/64)	39-56	194-221	388-457						
PIEMA_IAIF0	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/FONTAINEBLEAU/76)	386-452								
PIEMA_IAIK6	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/KENTUCKY/7/86)	386-452								
PIEMA_IAIK7	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/KENTUCKY/1/87)	386-452								
PIEMA_IAILE	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/LEXINGTON/1/66)	39-56	194-221	388-457						
PIEMA_IAIL0	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/LONDON/1416/71)	39-56	194-221	388-457						
PIEMA_IAIM4	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/MIAMI/1/63)	386-452								
PIEMA_IAINM	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/NEW HAMPSHIRE/1/76)	386-452								
PIEMA_IAINN	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/NEW JERSEY/8/76)	39-56	194-221	388-457						
PIEMA_IAIPR	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/PRAGUE/1/56)	39-56	194-221	388-457						
PIEMA_IAIRO	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/ROMANIA/80)	386-452								
PIEMA_IAISA	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/SANTIAGO/1/83)	386-452								
PIEMA_IAISP	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/SAO PAULO/1/76)	39-56	194-221	388-457						
PIEMA_IAISW	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUINEA/SWITZERLAND/13/72	39-56	194-221	388-457						

PCGENE	10787844	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PIEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	316-453								
PIEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	316-455								
PIEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	316-453								
PIEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	196-223								
PIEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	29-56	423-478							
PIEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	29-56	423-478							
PIEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	310-450								
PIEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	313-453								
PIEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	317-453								
PIEMA_IANE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/1/71)	40-67	397-453							
PIEMA_IANE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/10/72)	40-67	397-453							
PIEMA_IANE5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/5/76)	24-51	371-437							
PIEMA_IANIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NINGXIA/SWEDEN/74)	11-58	382-441							
PIEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	317-453								
PIEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PHILIPPINES/2/82)	305-534								
PIEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	29-56	423-478							
PIEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUI/7/70)	24-51								
PIEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	181-451								
PIEMA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	181-451								
PIEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	28-56	160-187	506-547						
PIEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/513/85)	119-146	384-441							
PIEMA_IATAJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	29-56								
PIEMA_IATK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	413-445								
PIEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	181-451								
PIEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	307-334								
PIEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	424-454	493-539							
PIEMA_IATKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	32-62	194-221	381-422						
PIEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1966)	419-449	500-536							
PIEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	31-55								
PIEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	40-67	387-453							
PIEMA_IAUS5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	29-56	423-478							
PIEMA_IAV17	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	41-68	398-454							
PIEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	424-477								
PIEMA_IAXA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XIAMEN/ENG/89)	29-56								
PIEMA_IAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	40-67	387-453							
PIEMA_IAZHO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	171-437								
PIEMA_IAZJO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1126/82)	171-437								
PIEMA_IAZN1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	418-478	506-547							
PIEMA_IAZNJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	418-478	506-547							
PIEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKEL/1/84)	387-453								
PIEMA_IVBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	400-431	439-481							
PIEMA_IVBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/1/)	390-421	429-471							
PIEMA_IVBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	391-419	429-471							
PIEMA_IVBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	391-418	429-471							
PIEMA_IVBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	399-430	438-482							
PIEMA_IVBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	389-420	428-472							
PIEMA_IVBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	393-424	432-476							
PIEMA_IVBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	398-429	437-481							
PIEMA_IVBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	398-429	437-481							
PIEMA_IVBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	391-422	430-474							
PIEMA_IVBV1	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	393-424	432-476							
PIEMA_IVBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	400-431	439-481							
PIEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	493-571								
PIEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	483-559								
PIEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	483-559								
PIEMA_INCHY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	482-558								
PIEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	496-572								

PECGENE	1997a178a4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	482-538								
PIEMA_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CK/YOTO/41/82)	482-538								
PIEMA_INCM1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CA/1/55/55PP/80)	482-538								
PIEMA_INCMA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CA/83/82)	483-539								
PIEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	483-539								
PIEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	483-539								
PIEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	483-539								
PIEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	483-539								
PIEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	64-91								
PIEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	64-91								
PIEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	64-91								
PIEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	64-91								
PIEMA_NDVH	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	64-91								
PIEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	64-91								
PIEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	64-91								
PIEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	64-91								
PIEMA_NDVTG	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B/48)	64-91								
PIEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	64-91								
PIEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-86	46-73							
PIEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	79-110	166-192							
PIEMA_PIIB	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PIEMA_PIIH	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PIEMA_PIIHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/12485/74)	27-61								
PIEMA_PIIHT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/345/80)	27-76								
PIEMA_PIIHU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/0105/82)	27-70								
PIEMA_PIIHV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/82)	27-61								
PIEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	27-61								
PIEMA_PIIHX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1311/77)	166-214	236-283							
PIEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POX VIRUS	79-106								
PIEMA_SENDS	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z/HOST MUTANTS)	79-106								
PIEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	79-106								
PIEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	79-106								
PIEMA_SENDJ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	79-106								
PIEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	79-106								
PIEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	23-52	194-421							
PIEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-146	173-202	216-243						
PIEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	109-146	173-202	216-243						
PIEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	109-146	173-202	216-243						
PIEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	109-146	173-202	215-242						
PIEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	111-148	177-211	214-244						
PIEX9_ADE01	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	100-134								
PIEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	100-134								
PIEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPES 3 and 7	97-127								
PIEX_ADE01	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	146-173	359-386	433-460						
PIEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	348-375								
PIEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	396-423								
PIEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	305-338								
PIGH_COWPX	HEMORRHAGE-INDUCING 38 KD PROTEIN	COWPOX VIRUS	28-55								
PIHG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	461-489								
PI196_ASFB7	LATE PROTEIN 196L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	13-43								
PI1262_ASFB7	LATE PROTEIN 1262R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	113-147								
PIBMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	17-44								
PIBMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	17-44								
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV141)	383-410								
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	6-33								
PIBMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	372-407								
PIBMP_SCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	3-48	131-158							
PIC18_HCMVA	PROB PROC & TRANSPORT PRO UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324								

PCGENE	[07:17]Tue 4	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2
FILE NAME	PROTEIN	VIRUS	58-85	482-522							
PICI1_HSV1A	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN 11)	661-691								
PICI1_MCMV3	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	248-275								
PIE8J_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40-67								
PIE68_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	48-78								
PIE86_HSV3A	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	12-49								
PIR05_HCMVA	HYPOTHETICAL PROTEIN UL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-162								
PIR12_HCMVA	HYPOTHETICAL PROTEIN UL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-62								
PIR13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	106-130								
PKFES_FSVGA	TYROSINE KINASE TRANSF PROTEIN FES	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	218-253								
PKFGR_FSVGR	TYROSINE KINASE TRANSF PROTEIN GR	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	227-263								
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSF PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	155-243	349-387							
PKFPS_FUSV	TYROSINE KINASE TRANSF PROTEIN FPS	FUJINAMI SARCOMA VIRUS	47-84								
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	41-68								
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1)	340-386								
PKITH_HSV3A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	334-361								
PKITH_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN TISSONE V182)	491-518								
PKR74_HSV1	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	141-168								
PKRBI_VACCC	10 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	141-168								
PKRBJ_VACCV	10 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	143-174								
PKRB2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-174								
PKRB2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-174								
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-74								
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	47-74								
PKROS_AVISU	AOS TYROSINE KINASE TRANSF PROTEIN	AVIAN SARCOMA VIRUS (STRAIN URJ)	111-138								
PKRYK_AVRSJ	TYROSINE KINASE TRANSF PROTEIN RYK	AVIAN RETROVIRUS RPL30	22-49								
PKYES_AVISY	TYROSINE KINASE TRANSF PROTEIN YES	AVIAN SARCOMA VIRUS (STRAIN Y73)	199-233								
PL100_ADE2I	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	386-413								
PL100_ADE5I	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	191-211								
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	206-233								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	148-175								
PLMP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-175								
PLMP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-175								
PLMP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJI)	148-175								
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	394-421								
PMCEL_SFVRA	RNA CAPPING ENZYME, LARGE SUBUNI	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-136	289-316	497-524	622-656					
PMCEL_VACCC	RNA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-112	291-318	610-657						
PMCEL_VACCV	RNA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN WR)	85-112	291-318	610-657						
PMCEL_VARV	RNA CAPPING ENZYME, LARGE SUBUNI	VARIOLA VIRUS	85-112	291-318	610-657						
PMCE_ASFB7	RNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	219-313								
PMOVP_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN W)	170-197								
PMOVP_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	170-197								
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90								
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LIHA)	46-80								
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LII)	46-80								
PMTCI_CHVNI	MODIFICATION METHYLASE CVBI	CHLORELLA VIRUS NC-1A	143-170	239-256							
PMTCI_CIVPI	MODIFICATION METHYLASE CVAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	4-31	110-173							
PMTC_AVDAJ	RYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CAJI	232-266	313-401							
PMTC_AVDMC	RYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	233-267	316-403							
PMTC_AVDMD	RYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MH2	233-267	316-403							
PMTC_AVDME	RYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	239-268	377-404							
PMTC_AVTOK	RYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	227-261	310-397							
PMTC_FLV	RYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	193-420								
PMTC_FLVTT	RYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420								
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	49-76	139-156							
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	85-112								
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	96-123								
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	48-75	189-230							

PCGENE	1971178x4	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 4	AREA 4	AREA 5	AREA 4	AREA 1	AREA 2	AREA 2
FILENAME	PROTEIN	VIRUS									
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C6033)	223-231								
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	140-174								
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653114)	40-74								
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	191-227								
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	191-227								
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH ISOLAT	191-227								
PNCAP_CVPRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	191-227								
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	238-265								
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	182-209								
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE IC280)	6-33	336-383							
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31	74-108	112-141						
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PNCAP_LASSG	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	64-99	147-174							
PNCAP_LASSJ	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	64-99	407-504							
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	64-97								
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	41-68	192-219							
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	64-99								
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	377-404	435-482							
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	377-404	444-488							
PNCAP_PIIH4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885	376-403								
PNCAP_PTPV	NUCLEOCAPSID PROTEIN	PUNTA TORO PHLEBOVIRUS	1-30								
PNCAP_PUUAH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	2-29								
PNCAP_PUUAS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	2-29								
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-120								
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-167								
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	133-167								
PNCAP_RABV5	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	133-167								
PNCAP_SENDI	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	383-404								
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	383-404								
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	383-404								
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	4-33								
PNCAP_SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	507-534								
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACAIBE VIRUS	30-77								
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	6-33								
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	68-102								
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	284-314								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARAH)	169-176	284-314							
PNCAP_VSVIG	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW	58-83								
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN	67-94	338-365							
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	58-83								
PNEF_HYIEL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119								
PNEF_HYIND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-119								
PNEF_HYIZ6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM1 / CLONE GRI-1)	96-137								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	47-81								
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82	33-64								
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	16-43	50-91							
PNRAM_IADA1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	51-81								
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	21-48								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PNRAM_IAJEC	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/1/74)	197-224	336-413							
PNRAM_IAJK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	46-76	364-400						
PNRAM_IAKJE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/1/1979)	50-81								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	50-81								
PNRAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71(H-A/QUEILANY/42N)	16-43	50-81							
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	16-43	50-81							
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	16-43								

PCGENE	10/31/1994	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2	AREA 3
FILE NAME	PROTEIN	VIRUS							
PNRAM_IAHUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/68/85)	49-88						
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	49-82						
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-81						
PNRAM_IAWBM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/1/84)	49-88						
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	16-43						
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-35						
PNS1_SIDEV	PROB NONSTRUC PRO PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	210-310						
PNS1_SIDEV	PROB NONSTRUC PRO PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	42-69						
PNS5_DNSVN	NON-STRUCTURAL PROTEIN	UKPATIENS NECROTIC SPOT VIRUS (STRAIN NL-07)	93-122						
PNS5_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CNPH/UNB-01)	5-32	412-467					
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L3)	5-33						
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69						
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-166	347-374	524-551				
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	65-93	394-421	514-541				
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	65-93	394-421	514-541				
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	100-127	420-447	415-491				
PP100_TISV6U	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	81-108	189-216	688-715	785-812			
PPAP1_VACCC	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115						
PPAP1_VACCV	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	88-115						
PPAP1_VARV	POLY(A) POL CATALYTIC SUBUNIT	VARIOLA VIRUS	88-115						
PPAP2_CAPVK	POLY(A) POL REG SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	118-145						
PPAP2_FOWPV	POLY(A) POL REG SUBUNIT	FOWLPOX VIRUS	27-54						
PPE11_NPVAC	11.1 KD PROTEIN IN PE 3'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	61-105						
PPE13_NPVOP	11.3 KD PROTEIN IN P26 3'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	61-93						
PPE18_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	204-248						
PPE38_NPVAC	41.3 KD IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-38	51-78					
PPEN1_ADE0X	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SA2)	96-123						
PPOL1_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	1172-1199	1775-1802	2236-2263				
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	1774-1801	2334-2361					
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROMO MOSAIC VIRUS	481-508	1909-1941					
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	170-197	636-677	958-985	1161-1195			
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	1096-1123						
PPOL2_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	801-828					
PPOL2_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	240-267	801-828					
PPOL2_GCMV	RNA2 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROMO MOSAIC VIRUS	111-38						
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	549-576						
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	982-1009						
PPOLO_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	17-44	1010-1037	1145-1172				
PPOLO_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	639-668	1082-1112	1303-1330	2233-2261	2476-2503	2609-2636	3613-3642
PPOLO_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	1303-1331	2143-2171	2519-2546	2802-2829	3323-3350		
PPOLO_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-123						
PPOLO_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	7-34	664-694	1082-1099	1900-1930			
PPOLO_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1040-1076						
PPOLO_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	643-672	841-868	1021-1057				
PPOLO_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1024-1060	1881-1908					
PPOLO_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	644-673	1022-1058					
PPOLO_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1024-1060						
PPOLO_CYVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	126-154						
PPOLO_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE 5227/90)	1858-1885	2890-2917	2989-3016				
PPOLO_DEN16	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	1544-1571	1858-1885	2908-2935	3981-3016	3117-3147		
PPOLO_DEN17	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	1544-1571	1858-1885	2485-2512	2908-2935	3981-3016	3117-3147	
PPOLO_DEN1J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	1544-1571	1858-1885	2908-2935	3117-3147	3346-3373		
PPOLO_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	1544-1571	1858-1885	2905-2932	2978-3011	3114-3144	3343-3370	
PPOLO_DEN3T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN TONGA 1974)	1134-1161	1448-1475					
PPOLO_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	837-864	1542-1569	1857-1884	2494-2521	3980-3014	3315-3372	
PPOLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2885-2930	3937-3011	3142-3169				
PPOLO_ECHO	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	213-240						

PCGENE	10711784	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PPOLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	70-108	1484-1518	1322-1361					
PPOLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETOGENIC)	70-97	1488-1520	1324-1365					
PPOLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	70-97	1488-1520	1324-1365					
PPOLO_ENMGJ	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN JTA)	70-108							
PPOLO_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	3-41							
PPOLO_FMDVI	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	702-729	1119-1146						
PPOLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	701-728	1119-1146						
PPOLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	1119-1146							
PPOLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU (C-S8))	101-128							
PPOLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	702-729							
PPOLO_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	699-726	1195-1222	1303-1333	1434-1461	1068-1095	1406-1440		
PPOLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	699-726	1195-1222	1068-1095	1406-1440	1332-1359			
PPOLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	702-729	1045-1072						
PPOLO_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	702-729	1045-1072						
PPOLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	374-401	2089-2116						
PPOLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	1049-1076	2089-2116						
PPOLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	378-405	1045-1072						
PPOLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	702-729	1045-1072						
PPOLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	702-729	1045-1072						
PPOLO_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 1A)	203-237	1021-1048	1117-1149	1434-1481				
PPOLO_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 4IC)	203-237	1021-1048	1117-1149	1434-1481				
PPOLO_HPAV6	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	203-237	1021-1048	1117-1149	1434-1481				
PPOLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	203-237							
PPOLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	182-216							
PPOLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	203-237	1021-1048	1103-1149					
PPOLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	203-237	1021-1048	1103-1149					
PPOLO_HPAVS1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 1993)	203-237	1021-1048	1103-1149					
PPOLO_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	207-241	1025-1052	1115-1142					
PPOLO_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	203-237							
PPOLO_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14	17-44	539-586	632-679	1877-1904				
PPOLO_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B	1132-1159	1855-1882						
PPOLO_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2	1135-1162	1552-1595						
PPOLO_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89	883-910	1141-1168	1566-1607	1862-1889				
PPOLO_HEV7	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	876-910							
PPOLO_BDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	231-277							
PPOLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	214-248	983-1010	2796-2823					
PPOLO_JAEV3	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	214-248	983-1010	2796-2823					
PPOLO_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOAR5981)	214-248	983-1010	2796-2823					
PPOLO_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	141-175	911-938						
PPOLO_KUNJM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN KRM61C)	980-1007							
PPOLO_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	431-465	1634-1661						
PPOLO_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	431-465							
PPOLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS	431-465							
PPOLO_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 536)	131-165	946-973						
PPOLO_MOFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT	671-698	1056-1083	1303-1330					
PPOLO_MOMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	10-37							
PPOLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	212-246							
PPOLO_ONV	GENOME POLYPROTEIN	ORNITHOGALLUM MOSAIC VIRUS	24-51	946-973						
PPOLO_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	377-404	704-738	811-858	900-927	1167-1201	1485-1512	1787-1814	2433-2464
PPOLO_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1060-1100	1901-1931						
PPOLO_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	670-697	1063-1100	1901-1933					
PPOLO_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1061-1099	1901-1931						
PPOLO_POL2W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1061-1099	1901-1931						
PPOLO_POL3J	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 31127)	1060-1098	1900-1930						
PPOLO_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PALEON/57 AND PALEON 12A(1)D)	1060-1098	1900-1930						
PPOLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	931-948	1498-1525	2731-2798					
PPOLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	1146-1187							

PCGENE ID/NAME	10/11/94 PROTEIN	All Viruses (no bacteriophage) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOLO_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	920-947	1497-1524	2770-2800						
PPOLO_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	920-947	1497-1524	2770-2797						
PPOLO_PAYVI	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA)	500-527								
PPOLO_PAYVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA 5-1)	391-418								
PPOLO_PAYVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	489-516								
PPOLO_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPD1)	311-315	1132-1137	1510-1537						
PPOLO_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O) (PVY)	433-460	701-735							
PPOLO_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	218-245	433-460	701-735	1486-1513	1777-1811				
PPOLO_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	433-460	701-735	1486-1513	1777-1811					
PPOLO_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	433-460	701-735							
PPOLO_PVYVI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	1124-1151	2703-2730							
PPOLO_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	10-37								
PPOLO_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UD 76)	1024-1060								
PPOLO_SVDVU	GENOME POLYPROTEIN	1024-1060									
PPOLO_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SUFFIN)	87-121	234-272	1632-1661	2261-2292	2907-2936				
PPOLG_TBEVW	GENOME POLYPROTEIN	BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	1632-1659								
PPOLO_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS	845-872	1748-1775	2416-2443	3223-3250					
PPOLO_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DEAN BBB)	79-117	200-237							
PPOLO_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	80-117	200-237							
PPOLO_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	80-117	200-237							
PPOLO_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	232-262	771-800							
PPOLO_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	406-433	670-704	2708-2741						
PPOLO_WMVI	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	202-229								
PPOLO_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	210-234	3385-3412							
PPOLO_YEFVI	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	436-463								
PPOLO_YEFVS	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	436-463								
PPOLO_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS	69-96								
PPOLH_POLIN	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN NAUJONEY)	1063-1101	1903-1933							
PPOLN_EEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1402-1463	1894-1921							
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 F1V)	445-472								
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	1014-1061								
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	219-246	349-376							
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	219-246	349-376							
PPOLN_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	219-246	349-376							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	219-245	348-375							
PPOLN_MODDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	933-982								
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	2453-2480								
PPOLN_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	119-147	1653-1681							
PPOLN_RVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB3092)	1057-1084	1477-1504	2418-2445						
PPOLN_RVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	146-173	1087-1114							
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	1060-2087								
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1134-1181								
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	936-970								
PPOLN_WEEV	NONSTRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	4-31								
PPOLS_BDV5	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	231-258								
PPOLS_BDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	231-258								
PPOLS_BDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	231-258								
PPOLS_BDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	231-258								
PPOLS_BDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	232-259								
PPOLS_BDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	231-258								
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	136-181								
PPOLS_RVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB3092)	939-973								
PPOLS_RVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973								
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1138-1165								
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	1138-1165								
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	920-947								
PPOL_BAEVM	PCL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	675-706	715-742							

PCGENE	10/21/94	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 4	AREA 3	AREA 4	AREA 2	AREA 3
FILENAME	PROTEIN	VIRUS								
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	886-924							
PPOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	333-360	818-865	1075-1102	1176-1205	1313-1347			
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	472-505	826-853						
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	472-505	826-853						
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	471-504	825-852						
PPOL_FENTI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	532-599	617-654						
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-473							
PPOL_FMVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-430							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703						
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-712							
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	674-712							
PPOL_HVIA2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	218-245	610-661						
PPOL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	230-257	617-671						
PPOL_HVIB5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	230-257	633-671						
PPOL_HVIBR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	230-257	631-671						
PPOL_HVIEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-244	624-660						
PPOL_HVIH2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIXB2 ISOLATE)	218-245	620-661	721-951					
PPOL_HVIJR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	332-249	624-665						
PPOL_HVIMA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	217-244	618-310	619-660					
PPOL_HVIMN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	221-248	621-664						
PPOL_HVIN5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	218-245	623-661						
PPOL_HVIND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-244	614-660						
PPOL_HVIOY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	218-245	620-661						
PPOL_HVIPV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	230-257	617-671						
PPOL_HVIRH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	217-244	619-660						
PPOL_HVIU4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE U)	217-244	511-540	619-660					
PPOL_HV2B2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (2/UC/DC-2/84 ISOLATE)	217-244	619-660						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-522							
PPOL_HV2DI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	471-562							
PPOL_HV2DJ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600							
PPOL_HV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.1)	491-588							
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562							
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	471-539							
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-563							
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY)	473-562							
PPOL_IPHA	PUTATIVE POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582							
PPOL_IPMA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	200-227	354-381	461-499					
PPOL_IPMAI	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	211-238	302-329	400-427					
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	130-157	221-248						
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	204-231							
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	453-480							
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	805-832							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	716-743	805-832						
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	101-128	190-217						
PPOL_OAVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	574-612	670-697						
PPOL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	67-94	411-505	873-900					
PPOL_RTBV	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	795-824							
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-91	176-203	202-229	410-437	447-476	1022-1049	
PPOL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	7-44	59-93	176-203	202-229	410-437	447-476	1022-1049	
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	437-454							
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1264 ISOLATE)	431-458	547-574	617-671					
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	43-72							
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	71-98							
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	416-463	482-516	642-669					
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	438-511							
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	657-691							
			248-269	616-645						

PCGENE (Version 8.1)	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	VIRUS	227-254	636-670							
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)								
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	533-560							
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	531-560							
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PJ16/SM14 ISOLATE)	496-523							
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE)	499-526							
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	601-628							
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	268-295	348-419						
PPOL_SRVI	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	378-612	670-697						
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	490-524	881-919						
PPOL_VLV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	88-116	490-524	881-919					
PPOL_VLV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	490-524	881-919						
PPR1_MMTVB	PROTEIN PR71	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	288-315							
PPR1_MMTVC	PROTEIN PR71	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	43-79							
PPR1_MMTVG	PROTEIN PR71	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	167-201							
PPYHD_CPVBM	POLYHEDRIN PRECURSOR	DOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	137-51							
PPYHD_NPVAC	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVAS	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-48	201-238						
PPYHD_NPVBM	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-46							
PPYHD_NPVBS	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVHC	POLYHEDRIN	HYPHANTRIA CUNEA NUCLEAR POLYHEDROSIS VIRUS	13-40							
PPYHD_NPVLD	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVMB	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVOP	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHEDROSIS VIRUS	13-48							
PPYHD_NPVPF	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVSE	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	14-48							
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68							
PREV_VILV	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-62							
PRDR_ASFM2	RIBONUC-DIPHOSPH REDUCT LARGE CHA	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI/LIL 20/1)	7-41	88-119	161-190					
PRDR_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-649							
PRDR_HSV2B	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-103							
PRDR_HSV5A	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	324-351							
PRDR_VACCC	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-401							
PRDR_VACCV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN WR)	367-401							
PRDR_VARV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARIOLA VIRUS	367-401							
PRDR_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146							
PRDR_HSVB1	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	90-117							
PRPM_VACCV	RNA-POL-ASSOC TRANS SPEC FACTOR	VACCINIA VIRUS (STRAIN WR)	41-68	513-540						
PRPM_VARV	RNA-POL-ASSOC TRANS SPEC FACTOR	VARIOLA VIRUS	41-73	77-104	513-540					
PRPO1_VACCC	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-264	587-616	810-837	961-992				
PRPO1_VACCV	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN WR)	237-264	587-616	810-837	961-992	1011-1038			
PRPO1_VARV	DNA-DIRECTED RNA POL 147 KD	VARIOLA VIRUS	237-264	587-616	810-837	961-992				
PRPO1_CAPVK	DNA-DIRECTED RNA POL 132 KD	CAPRIPOXVIRUS (STRAIN KS-1)	10-45	114-155						
PRPO1_COWPX	DNA-DIRECTED RNA POL 132 KD	COWPOX VIRUS	211-241	481-509						
PRPO1_VACCV	DNA-DIRECTED RNA POL 132 KD	VACCINIA VIRUS (STRAIN WR)	211-241	481-509						
PRPO1_VARV	DNA-DIRECTED RNA POL 132 KD	VARIOLA VIRUS	211-241	481-509						
PRPO4_CAPVK	DNA-DIRECTED RNA POL 35 KD	CAPRIPOXVIRUS (STRAIN KS-1)	36-63							
PRPO7_VACCV	DNA-DIRECTED RNA POL 19 KD	VACCINIA VIRUS (STRAIN WR)	8-35	43-70						
PRPO7_VARV	DNA-DIRECTED RNA POL 19 KD	VARIOLA VIRUS	43-70							
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1333-1360							
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	888-915	1639-1673						
PRPP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	575-602							
PRPP1_IAANN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	119-146							
PRPP2_IADUC	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	119-146							
PRPP2_IAFPR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146							
PRPP2_IAGUL	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	119-146							

PCGENE	10/21/94	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PRAP1_IAUCO	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/EQUINE2/LONDON/1416/73)	119-146								
PRAP1_IAJITE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/EQUINE2/TENNESSEE/5/86)	119-146								
PRAP1_IAKOR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/KOREA/A17/68)	119-146								
PRAP1_IALE1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146								
PRAP1_IALE1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146								
PRAP2_IAMAN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	119-146								
PRAP1_IANT6	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/ANT/60/68)	119-146								
PRAP2_IAPI0	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	119-146								
PRAP2_IAPUE	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	119-146								
PRAP2_IARUD	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	119-146								
PRAP2_IASIN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	119-146								
PRAP2_IATUR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	119-146	337-354							
PRAP2_IAVI7	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	119-146								
PRAP1_IAWIL	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	119-146								
PRAP2_IAZI13	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119-146								
PRAP1_IAZI13	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119-146								
PRAP1_IAZI1I	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	119-146								
PRAP1_IAZJE	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	137-194								
PRAP1_INBAC	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE)	164-194								
PRAP1_INBS1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	137-194								
PRAP1_IABUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/TOKYO/1/77)	337-367								
PRAP3_IACHI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	331-358								
PRAP3_IAEPR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	331-361	480-507							
PRAP3_IAZTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	487-514								
PRAP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	2-33	472-509							
PRAP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE)	2-33	472-509							
PRAP3_INCBE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	309-336								
PRAP3_INCJJ	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	309-336								
PRAP3_THOGV	RNA-DIRECTED RNA POL SUB P3	THOGOTO VIRUS	149-176	358-385							
PRAPA_CVHO3	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONA VIRUS (STRAIN 229E)	3116-343	724-751	1971-2001	3781-3811					
PRAPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONA VIRUS MHV (STRAIN JHM)	6126-651	6136-6333							
PRAPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	27-54	537-584	942-984						
PRAPB_CVMJ3	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	885-915	1129-1170							
PRAPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	885-915	1129-1170							
PRAPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772)	20-47	393-420	983-413						
PRAPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1310-1347	2196-2231	2347-2374						
PRAPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8322)	185-200	416-443							
PRAPL_BTV10	RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	1032-1059								
PRAPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	80-114	317-350	1802-1861	1892-1919					
PRAPL_CDVD	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	24-51								
PRAPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	404-433	461-510	564-591	718-765	905-946	1993-2020			
PRAPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192	210-237	667-694	788-815	1007-1034	1118-1165	1453-1480	1776-1803	2062-2089
PRAPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	991-1018	1143-1170	1490-1524	1811-1838	2029-2067	2216-2266			
PRAPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	991-1018	1490-1524	2239-2267						
PRAPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	93-122	196-223	2121-2148						
PRAPL_MUMSM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	111-142	780-807	1602-1632						
PRAPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C43)	256-284	477-504	1979-2013						
PRAPL_PIUHT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	223-249	1364-1398	1687-1721	1901-1946					
PRAPL_PIUH4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	52-86	136-163	608-638	1081-1123	1994-2016	2115-2142			
PRAPL_PUUMH	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	388-415	537-591	731-758	864-891	926-953	1940-1971	1998-2025		
PRAPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	204-231	605-632	2066-2121						
PRAPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	204-231	605-632	2066-2121						
PRAPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	855-882								
PRAPL_RVFV2	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	1336-1363	1633-1687							
PRAPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	629-656	1052-1116	1729-1756	2145-2180					
PRAPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	469-478	903-936	1569-1596	1965-2000					

PCGENE	107217844	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	639-656	1082-1116	1729-1756	2145-2180					
PRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	461-488	564-591	731-758	905-932					
PRPL_SEOUB	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	1006-1033	1250-1277	1680-1710	2120-2147					
PRPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	825-859	1092-1119	1490-1520	1973-2000	2086-2107				
PRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	477-504	542-573	1119-1150	1195-1229	1330-1357	1415-1442	1671-1698	1837-1884	2013-2110
PRPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIIIMBR-01)	2166-2193	2314-2368	2771-2798						
			142-187	1037-1071	1104-1331						
PRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	1330-1357	1809-1836							
PRPL_VSVIH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN HAZELHU	1205-1231	1809-1836							
PRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	1340-1367	1768-1798							
PRPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	228-264	564-591							
PRUPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	338-383								
PRUPO_BWYVF	PUTATIVE RNA-DIR RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	772-799								
PRUPO_BYDV1	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	772-799								
PRUPO_BYDVP	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	772-799								
PRUPO_BYDVR	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	772-799		667-694						
PRUPO_CARMV	PUTATIVE RNA-DIR RNA POL	CARNATION MOTTLE VIRUS	93-127	231-304							
PRUPO_CGMVS	PUTATIVE RNA-DIR RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	387-414	1040-1067							
PRUPO_IBDV3	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	336-363	392-419							
PRUPO_IBDVA	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	661-688	717-744							
PRUPO_IPNV1	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	772-800								
PRUPO_IPNV3	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	772-800								
PRUPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	814-886	1032-1079							
PRUPO_PPMVS	PUTATIVE RNA-DIR RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	402-429	700-736	1072-1099						
PRUPO_REOVD	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	61-88								
PRUPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	61-88								
PRUPO_ROTBR	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	68-95	218-245	791-818						
PRUPO_ROTBU	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	65-93	218-245	791-841	935-1002					
PRUPO_ROTPC	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	73-102	163-190	540-585					
PRUPO_ROTPG	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED	65-93	102-139	791-839	935-1002					
PRUPO_ROTSI	RNA-DIR RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	65-93	191-839	935-1002						
PRUPO_SCVLA	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	147-188	183-204	241-271	1107-1134	1918-2008				
PRUPO_TACV	RNA POLYMERASE	TACAJUBE VIRUS	210-237	1316-1343	1397-1424						
PRUPP_TMGMV	PUTATIVE RNA-DIR RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	99-133								
PRUPP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	313-370								
PRUPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	99-141								
PRUPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PRUPP_HRSVI	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PRUPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PRUPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PRUPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	313-370								
PRUPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	313-370								
PRUPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	313-370								
PRUPP_PIIHB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	84-111	214-261	333-416						
PRUPP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	84-111	214-261	333-416						
PRUPP_PIIHD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-372)	84-111	212-262	333-416						
PRUPP_PIIHE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-1401)	84-111	244-271	333-416						
PRUPP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS	167-194	222-236							
PRUPP_PIIHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIDA)	167-194	222-236							
PRUPP_PIIB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	34-91	235-282	285-314						
PRUPP_PIIH4	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	114-144	269-299							
PRUPP_PIHHA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIIDA)	4-38								
PRUPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127								
PRUPP_SEND3	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	330-357	379-420							
PRUPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/4)	330-357	379-420							
PRUPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	330-357	379-420							
PRUPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	330-357	379-420							
PRUPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	330-357	379-420							

PCGENE	[07:11784	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA4	AREA7	AREA8	AREA9
PRNPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-217	226-263							
PSODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	72-99								
PSODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	72-99								
PSPIR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	91-118	140-167	227-261	361-390					
PSPIJ_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	286-313								
PSPIO_VACCV	SERINE PROTEINASE INHIBITOR 2	VACCINIA VIRUS (STRAIN WR)	59-86								
PSPIA_VACCC	SERINE PROTEASE INH 2 HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-45								
PTIC_CHVP1	TYPE II RESTRICTION ENZYME CviAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	16-43								
PTAA2_VACCV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS	95-133								
PTAGF_FOWPV	TRANS-ACTIVATOR PROTEIN FPV	FOWLPOX VIRUS	3-31								
PTAG1_VACCV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS	3-30								
PTAG1_VARV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-30								
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-318								
PTALA_POVBO	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	503-537								
PTALA_POVHA	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	507-541								
PTALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	224-258	616-684							
PTALA_POVMJ	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 2)	510-540								
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	511-538								
PTALA_POVSC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	508-533								
PTATR_NPVAC	TRANS-ACT TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	407-434	489-523	532-559						
PTATR_NPVBM	TRANS-ACT TRANS REG PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	412-439	494-528	537-564						
PTATR_NPVOP	TRANS-ACT TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	312-354								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	765-772	1315-1342	1344-1371	1876-1903					
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2201-2229							
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1631-1710							
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	703-729	738-762	767-611	962-993	1098-1181	1661-1688	1884-1911		
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	729-756	766-793	1705-1732						
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	724-807	832-700	773-814	846-898	949-986	990-1017	1467-1497	1102-2135	
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1339-1609							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	315-413								
PTMAF_AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	301-316								
PTOP1_SFVKA	DNA TOPOISOMERASE I	SHOPE FIBROMA VIRUS (STRAIN KASZA)	38-65	132-176							
PTOP1_VACCV	DNA TOPOISOMERASE I	VACCINIA VIRUS	38-65								
PTOP1_VARV	DNA TOPOISOMERASE I	VARIOLA VIRUS	38-65								
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI/LIL 20/1)	902-936								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-143								
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	120-147								
PULA6_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	542-569						
PULA6_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586-613								
PULA6_HSVEB	VIRION GENE 38 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PULA6_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	13-42	302-338	368-403						
PULA8_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	8-47								
PULB1_EBV	HYPOTHETICAL PROTEIN BBLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	13-42								
PULB1_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PULB1_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PULB4_VZVD	HYPOTHETICAL GENE 44 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PULB6_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PULB6_HCMVA	HYPOTH PRO UL10 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PULB7_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PULB7_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407								
PULB8_HSV11	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	204-231	362-389						
PULB8_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	234-284							
PULB8_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	345-375								
PULB9_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-143								
PULB9_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-235								
PULB9_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-139								
PULB9_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								

FCGENE	107a178a4	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS									
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	470-497	833-884							
PUL37_HSVEB	GENE 37 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	715-749	987-1014							
PUL37_HSV8A	GENE 37 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	31-65	681-737							
PUL37_VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-134	485-512	719-746	976-1003					
PUL41_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	330-364								
PUL42_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	231-258								
PUL43_VZVD	GENE 13 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	126-136	312-349							
PUL43_HCMVA	PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-148	448-485	763-790	810-833					
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	488-513								
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	488-513								
PUL47_HSVEA	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	196-217								
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-188								
PUL53_EBV	PROB DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	185-212	787-814							
PUL53_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	193-220	945-970							
PUL53_HSV8A	PROB DNA REP GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-157								
PUL53_VZVD	PROB DNA REP GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-337								
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-101								
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92								
PUL73_HCMVA	UL73 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-32								
PUL73_HSV8A	HYPOTHETICAL GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	9-36								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-70								
PUL87_EBV	HYPOTHETICAL PROTEIN BLRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	409-436								
PUL87_HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	536-563	729-768							
PUL87_HSV8A	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	581-609								
PUL92_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	168-196							
PUL92_HSV8A	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	92-122								
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	28-53	314-381							
PUL95_HSV6U	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	73-100	105-134							
PUL96_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-31	443-477							
PUL89_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-78								
PUL90_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	90-124								
PUNO_HSV8A	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176								
PUNO_SFVKA	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115								
PUNO_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	83-116	129-156							
PUNO_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	83-116	129-156							
PUNO_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	83-116								
PUS09_HCMVA	HYPOTHETICAL PROTEIN HCMV3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-47								
PUS14_HCMVA	HYPOTHETICAL PROTEIN HCMV4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	237-308								
PUS18_HCMVA	MEMBRANE PROTEIN HCMV5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-218								
PV121_ASFL3	L13 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L133)	2-29								
PV133_AMYLE	133 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	702-729								
PV137_ASFL3	L13 137 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L133)	2-29								
PV16K_TRVRL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	59-86								
PV140_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	696-560	945-972							
PV16K_TRVS	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	79-113								
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	23-54	710-737	840-868						
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	23-58	384-411	816-863	892-919					
PV1A_COMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	248-276								
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-38								
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-38	864-902							
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-38								
PV1A_PSVJ	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	4-31	372-399							
PV1A_TAV	1A PROTEIN	TOMATO ASPERMY VIRUS	11-38	271-298	378-405	857-884					
PV25K_NPVAC	25 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-31								
PV29K_PEBV	29.4 KD PROTEIN	PEA EARLY BROWNING VIRUS	140-170								
PV29K_TRVSY	29 KD PROTEIN	TOBACCO RATTLE VIRUS	176-197								

PCGENE FILE NAME	107x178x4 PROTEIN	All Viruses (no bacteriophage) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	48-75								
PV2A_BDMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	301-328								
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	178-205								
PV2A_CMVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	792-819								
PV2A_PSV	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	325-352	717-731							
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	313-340	722-736							
PV30K_HCMVE	30 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-221								
PV30K_TRVTC	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	130-160								
PV31P_ADE41	33 KD PHOSPHOPROTEIN	HUMAN ADENOVIRUS TYPE 41	15-42								
PV362_ASFB7	K'161 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	75-102								
PV363_ASFB7	D'163 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	3-30	172-199							
PV3A_BMV	3A PROTEIN	BROME MOSAIC VIRUS	11-38								
PV3A_CMVFN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	222-252								
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	217-252								
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	222-253								
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	222-253								
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	25-57								
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN USO18/66)	29-56								
PV3B_IBVB	3B PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	6-33								
PV30K_BYDVP	30 KD PROTEIN	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	119-146								
PV31K_BWYVF	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	424-451							
PV31K_BWYVG	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GRU)	113-147	424-451							
PV35R_PLRV1	35 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	124-151	438-472							
PV35R_PLRVW	35 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	124-151	438-477							
PV51K_BSMV	51 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-155								
PV70K_PLRV1	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	110-140								
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	110-140								
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-134								
PVA06_VACCC	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	157-216	230-277	283-310	314-353					
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	136-215	249-276	282-309	313-354					
PVA06_VARV	PROTEIN A6	VARIOLA VIRUS	157-216	256-277	283-310	314-353					
PVA08_VACCC	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-206								
PVA08_VARV	PROTEIN A8	VARIOLA VIRUS	176-206								
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	60-93								
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	219-283								
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	220-284								
PVA18_VARV	36 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	440-467								
PVA20_VACCC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-67	330-357							
PVA20_VARV	PROTEIN A20	VARIOLA VIRUS	8-67	330-357							
PVA22_VACCC	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	45-72								
PVA22_VARV	PROTEIN A22	VARIOLA VIRUS	56-83								
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-144								
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	95-144								
PVA28_VACCV	PROTEIN A28	VACCINIA VIRUS (STRAIN WR)	22-49								
PVA28_VARV	PROTEIN A28	VARIOLA VIRUS	22-49								
PVA30_VACCV	PROTEIN A30	VACCINIA VIRUS (STRAIN WR)	12-55								
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PVA31_VARV	PROTEIN A31	VARIOLA VIRUS	88-122								
PVA34_VACCC	PROTEIN A34	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-114								
PVA34_VACCV	PROTEIN A34	VACCINIA VIRUS (STRAIN WR)	87-114								
PVA34_VARV	PROTEIN A34	VARIOLA VIRUS	87-114								
PVA36_VACCV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	120-155								
PVA36_VARV	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	127-154								
PVA3L_VACCC	PROTEIN A3L	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-81								
PVA3L_VACCV	PROTEIN A3L	VACCINIA VIRUS (STRAIN WR)	44-81								
PVA3L_VARV	PROTEIN A3L	VARIOLA VIRUS	44-91								
PVA59_VACCC	PROTEIN A59	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71	155-182							

PCGENE	107x178x4	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS									
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109	193-220							
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	145-172								
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	145-172								
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	146-173								
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	143-184								
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	143-184								
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	142-184								
PVA49_VACCC	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	61-91								
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	61-91								
PVA49_VARV	PROTEIN A49	VARIOLA VIRUS	61-91								
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	55-82	126-156	435-462						
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	55-82	126-156	435-462						
PVAL1_BCTV	ALI PROTEIN	BEET CURLY TOP VIRUS	22-49								
PVAL1_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	79-106								
PVAL1_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	79-106								
PVAL1_SLCV	ALI PROTEIN	SQUASH LEAF CURL VIRUS	101-128								
PVAL1_TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	79-129								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	93-129							
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-129							
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-129							
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-129							
PVAT_CAMVS	APHID TRANSMISSION PROTEIN		22-70	93-130							
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70								
PVAT_CERV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	102-138								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	52-82	103-130							
PVB01_VACCV	PROTEIN B1	VACCINIA VIRUS (STRAIN WR)	108-135								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	92-123	182-211	286-313	324-361					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	92-123	182-211	286-313	324-361					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	89-117	182-211	286-313	324-361					
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LC16M0)	234-284								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN COPENHAGEN)	234-284								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LISTER)	234-284								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN WR)	234-284								
PVB07_VACCV	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	28-62								
PVB08_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-53								
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-53								
PVB11_VACCC	PROTEIN B11	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-54								
PVB11_VACCV	PROTEIN B11	VACCINIA VIRUS (STRAIN WR)	5-38								
PVB16_COWPX	IL-1 BIND PRO PRECURSOR	COWPOX VIRUS	113-140								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	258-285								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)	258-285								
PVB18_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375								
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375								
PVB18_VARV	PROTEIN B18	VARIOLA VIRUS	337-378								
PVB19_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	182-212								
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	180-210								
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	180-210								
PVB19_VARV	SURFACE ANTIGEN S PRECURSOR	VARIOLA VIRUS	180-210								
PVB20_VACCC	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-82								
PVB21_VACCV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	64-91								
PVBL1_BGMV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	120-147	248-275							
PVBL1_CLVK	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	118-145								
PVBL1_CLVN	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	118-145								
PVBL1_PYMVV	BL1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	120-147								
PVC02_VACCC	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	405-432								
PVC02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN WR)	41-71	405-432							

PCGENE	10?x17?x4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	209-236	484-515							
PVC04_SFVKA	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	12-46								
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46								
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	12-46								
PVC05_SFVKA	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-125	152-179							
PVC05_VACCC	PROTEIN C5	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-65								
PVC05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	38-65								
PVC05_VARV	PROTEIN C5	VARIOLA VIRUS	36-66								
PVC07_VACCV	PROTEIN C7	VACCINIA VIRUS (STRAIN WR)	80-111								
PVC07_VARV	PROTEIN C7	VARIOLA VIRUS	80-111								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-69	82-116	178-205	232-279	289-323	575-605			
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	42-69	82-116	178-205	232-279	289-323	575-605			
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-163								
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	136-163								
PVC11_SFVKA	PROTEIN C11	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-30	39-66	137-182	206-240					
PVC17_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-152								
PVC18_VACCC	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-74								
PVC19_SFVKA	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	56-97								
PVC20_VACCC	PROTEIN C20/B26	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-99								
PVC22_VARV	PROTEIN C22/B18 HOMOLOG	VARIOLA VIRUS	299-326								
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	136-170	355-382							
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	769-799								
PVCG1_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-165	199-248							
PVCOM_ADE02	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	88-115								
PVCOM_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	87-114								
PVD03_FOWP1	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	6-33	184-211	321-348						
PVD03_VACCC	PROTEIN D3	VACCINIA VIRUS (STRAIN COPENHAGEN)	240-267	333-360							
PVD03_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	240-267								
PVD03_VARV	PROTEIN D3	VARIOLA VIRUS	240-267								
PVD09_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-150								
PVD09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	123-150								
PVD09_VARV	PROTEIN D9	VARIOLA VIRUS	123-160								
PVD10_SFVKA	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	18-52								
PVDBP_CERV	DNA-BINDING PROTEIN	CARNATION ETCHED RING VIRUS	2-33								
PVE02_VARV	PROTEIN E2	VARIOLA VIRUS	282-322								
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-116	437-464							
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	89-116	437-464							
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	89-116	367-394	437-464						
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	180-207								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	103-130								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89								
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	25-59								
PVE1_HPV47	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	146-173								
PVE1_HPV57	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	21-48								
PVE26_NPVAC	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-113								
PVE2_CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	17-51								
PVE2_HPV05	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	157-184	334-361							
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	61-105	312-342							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	313-340								
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	159-186								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-193								
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	304-331								
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33									

PCGENE	107x178x4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	158-192	327-354							
PVE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	7-34	323-357							
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	17-51	148-175	276-303						
PVE2_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	137-184								
PVE2_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	166-193								
PVE2_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	2-36	309-336							
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	17-51								
PVE2_HPV5B	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	120-150	327-361							
PVE2_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	267-294	202-229							
PVE2_PCPV1	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	81-108								
PVE4_HPV05	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	66-93								
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	59-86								
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	75-102								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	63-97								
PVE4_HPV31	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	203-229								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	30-60								
PVE4_HPV5B	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	30-60								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	30-60								
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	27-54								
PVE5_HPV33	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	11-41								
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	33-62								
PVE5_PCPV1	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	73-102								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	69-96								
PVE6_HPV31	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	71-102								
PVE6_HPV39	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	119-146								
PVE6_HPV41	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	73-102								
PVE6_HPV45	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	72-99								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	71-102								
PVE6_HPVME	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	620-647								
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	411-438								
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	318-366								
PVENV_DHVI1	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/3313/61)	120-147								
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	313-347								
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	71-110	185-212							
PVF03_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110	185-212							
PVF03_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	33-60								
PVF05_VACCP	35 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN L-IVP)	33-60								
PVF05_VACCV	35 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN WR)	10-44								
PVF06_VARV	PROTEIN F6	VARIOLA VIRUS	274-321								
PVF11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	270-317								
PVF11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	274-321								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	10-37	113-140	534-581						
PVF12_VACCC	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-37	113-140	534-581						
PVF12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	10-37	202-236	534-581						
PVF12_VARV	PROTEIN F12	VARIOLA VIRUS	35-62	152-179							
PVF16_VACCC	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	35-62	152-179							
PVF16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	35-62	149-179							
PVF16_VARV	PROTEIN F16	VARIOLA VIRUS	146-173								
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	59-86								
PVFU5_ORFNZ	10 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	37-64								
PVFU5_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-64								
PVFU5_VACCV	KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	225-252	301-335							
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	164-191	240-274							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	225-252	301-335							
PVG01_VARV	PROTEIN G1	VARIOLA VIRUS	96-123								
PVG02_VACCV	15ATIN-B-TSC DEP PROTEIN	VACCINIA VIRUS (STRAIN WR)	96-123								
PVG02_VARV	15ATIN-B-TSC DEP PROTEIN	VARIOLA VIRUS									

PCGENE	107a17bs4	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVG00_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AUSP)	146-176								
PVG01_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVG05_VACCC	PROTEIN G5	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75	131-161	225-239	355-389					
PVG03_VARV	PROTEIN G3	VARIOLA VIRUS	48-75	124-161	215-289	355-389					
PVG07_HSV11	HYPOTH GENE 7 MEMB PRO	ICTALURID HERPESVIRUS 1	71-98								
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	308-338								
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	271-301								
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	308-338								
PVG12_SPV1R	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	11-45								
PVG17_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	173-204								
PVG18_HSV11	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG1_SPV1R	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 D	260-287								
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS 4	287-314	383-410							
PVG22_HSV11	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	373-400	581-622	668-705	766-824					
PVG24_HSV11	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1	31-58								
PVG28_HSV11	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	253-290	497-528							
PVG3R_AMEPV	HYPOTHETICAL G3R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	33-64	91-118							
PVG3_SPV1R	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 D	285-326								
PVG3_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4	146-177	275-305	362-390						
PVG34_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1	95-122								
PVG37_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	651-678	1088-1115							
PVG3L_AMEPV	HYPOTHETICAL G3L PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	2-29								
PVG3_SPV1R	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 D	15-49								
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4	18-52	87-148							
PVG45_HSV5A	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165								
PVG46_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-169	346-373	897-924	973-1007					
PVG48_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394								
PVG4R_AMEPV	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	4-31								
PVG4_SPV1R	GENE 4 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 D	116-146								
PVG51_HSV11	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG52_HSV5A	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74								
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG5_SPV1R	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	65-92								
PVG5_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	56-83								
PVG63_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	550-584								
PVG64_HSV11	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1213-1254								
PVG66_HSV11	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	362-406								
PVG67_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1342-1369								
PVG68_HSV11	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG73_HSV11	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVG7_SPV4	GENE 7 PROTEIN	SPIROPLASMA VIRUS 4	14-44								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	1230-1260	2408-2435							
PVGL1_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	399-426	642-676	1022-1084	1278-1305					
PVGL1_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	399-426		1022-1084	1278-1305					
PVGL1_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	399-426	642-676	1022-1084	1278-1305					
PVGL1_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	399-426	642-676	1022-1084	1278-1305					
PVGL1_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	399-426	642-676	1022-1084	1278-1305					
PVGL1_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	399-426	642-676	1022-1084	1278-1305					
PVGL1_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	770-797	809-835	1036-1112						
PVGL1_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	643-684	1030-1092							
PVGL1_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	36-63	591-632	978-1040						
PVGL1_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	643-684	1030-1092							
PVGL1_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	502-543	889-951							

PCGENE	10/31/94	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 1	AREA 3	AREA 4	AREA 1	AREA 4	AREA 2
PVGL3_CVPFS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772)	69-110	692-733	1072-1145	1353-1389					
PVGL3_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN MILLER)	69-110	692-733	1069-1145	1353-1389					
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR46)	73-107	690-731	1067-1143	1351-1387					
PVGL3_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD)	69-107	690-731	1067-1143	1351-1387					
PVGL3_CVPRI	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH ISOLAT	468-509	845-921	1129-1165						
PVGL3_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	468-509	845-921	1129-1165						
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NED7	69-107	690-731	1067-1143	1351-1387					
PVGL2_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGL4_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-233	434-481	709-736	1072-1148	1356-1392				
PVGL3_IBV6	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6082)	809-836	876-903	1037-1091						
PVGL3_IBVD2	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	808-835	875-902	1036-1090						
PVGL2_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	809-836	876-903	1037-1091						
PVGL2_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	808-835	875-902	1036-1090						
PVGL2_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	808-835	875-902	1036-1090						
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95-122	631-658							
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-88	397-424	440-467	851-878					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	30-88	397-424	435-462	852-879					
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454								
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	447-474								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS15A)	443-470	934-961							
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	616-643							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	443-470	934-961							
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	933-960							
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-120	332-379							
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475							
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295-322								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295-322								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-65	154-202	216-243	442-469	486-511				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	154-202	216-243	444-471	488-513				
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	154-202	216-243	444-471	488-513				
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	252-293	340-367							
PVGLF_HRSV1	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65	154-203	442-471	488-515					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65	154-202	213-243	488-518					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	154-202	216-243	444-471	488-515				
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	38-65	154-202	213-243	442-471	488-518				
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAINS EDMONSTON AND HALLE)	228-262								
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	231-265								
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	228-262								
PVGLF_MUMP1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	447-486							
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	447-486							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	447-486							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	151-178	426-511							
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	151-178	426-512							
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45)	151-178	426-512							
PVGLF_NDVHJ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HERTS)	151-178	426-512							
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	151-178	426-512							
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	151-178	426-512							
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LASOTA)	151-178	192-219	426-512						
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	151-178	437-512							
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	151-178	433-512							
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	151-178	426-512							
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B/48)	151-178	426-512							

PCGENE	107x178x4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	151-178	426-512							
PVGLF_PIIODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	36-63	221-262	309-336						
PVGLF_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	147-174	210-266							
PVGLF_PIIH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	90-117	141-175	238-266	483-528					
PVGLF_PIIHQ	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GRÉER)	90-117	141-175	238-266	483-528					
PVGLF_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	90-117	141-175	238-266	483-528					
PVGLF_PIIB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	455-497						
PVGLF_PIIH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	113-182	207-241	457-497						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	224-265	458-485							
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	224-265	458-506							
PVGLF_SENDS	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	122-149	211-245	480-507						
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	122-149	211-245	480-507						
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	122-149	211-245	480-507						
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	122-149	211-245	480-507						
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN 2)	122-149	211-245	480-507						
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	144-185	241-269	459-496						
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	117-171	417-444							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	124-161	193-200	457-484						
PVGLG_BEFV	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-557								
PVGLG_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-123								
PVGLG_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP D / STRAIN 18537)	63-93								
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD5857)	66-107								
PVGLG_HRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD86190)	243-273								
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 8/60)	66-93								
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	271-298								
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
PVGLG_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	489-519								
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	472-499								
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	549-576	619-648							
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-136	270-297							
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-135								
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	62-89	360-403							
PVGLH_HSV3A	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	388-415								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-111								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	512-546	914-941	1128-1255						
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	913-950								
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	340-374	504-535	682-709						
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	945-972								
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	73-100	693-720							
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	75-102								
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	75-102								
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	75-102								
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	628-655	1069-1101							
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	69-96								
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	72-110								
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	72-110								
PVGLM_SEOUB	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	513-540	693-720							
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	73-100	513-540	694-721						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	73-100	513-540	694-721						
PVGLN_BEFV	NONSTRUCT GLYCOPRO GNS PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-564								
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	48-82	1145-1179	1184-1211	1505-1532					
PVGLY_TUNN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TUNIN ARENAVIRUS	14-41								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	86-113	316-346							
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	86-113								
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	334-375								
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	109-136	315-350							
PVGLY_TACVS	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN VS)	303-338								

PCGENE	10?a1?8a4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLY_TACV1	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN V1)	302-337								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN TRVL 11598)	302-338								
PVCNM_CPMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-221								
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSO	EBOLA VIRUS	280-314								
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN MUSOKE)	559-589	619-646							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN POPP)	559-589	619-646							
PVH03_VACCC	PROTEIN H3	VACCINIA VIRUS (STRAIN COPENHAGEN)	132-166								
PVH03_VACCV	PROTEIN H3	VACCINIA VIRUS (STRAIN WR)	132-166								
PVH05_VARV	PROTEIN H5	VARIOLA VIRUS	64-91	150-184							
PVHEL_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	130-160								
PVHRP_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	241-275								
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	241-275								
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	90-117	153-180							
VI01_VARV	PROTEIN I1	VARIOLA VIRUS	90-117	153-180							
VI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	160-190								
VI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	160-190								
VI03_VARV	PROTEIN I3	VARIOLA VIRUS	160-190								
VI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	290-317	548-575	593-632						
VI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	290-317	548-575	593-632						
VI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	290-317	548-575	593-632						
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288								
VIE2_NPVOP	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	355-385								
VIEN_NPVAC	IE-REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	217-323	343-400							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	62-89								
VIF_SIVAJ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	2-36								
VIM2_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174								
VIM2_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-107								
VINT_SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-100								
VI01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56								
VI01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56								
VI01_VARV	PROTEIN J1	VARIOLA VIRUS	22-56								
VL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-383								
VL1_FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-65								
VL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392								
VL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
VL1_HPV33	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-46								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	345-372								
VL1_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46								
VL1_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	45-72								
VL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
VL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	415-442								
VL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-357								
VL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	330-357								
VL96_IRV1	L96 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	623-652							
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN M1	REOVIRUS (TYPE 1 / STRAIN LANG)	290-317								
PVM21_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	623-662								
PVM22_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVM2_REOVI	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 2 / STRAIN DJ/JONES)	624-661								
PVM3_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-N	REOVIRUS (TYPE 3 / STRAIN DEARING)	159-186	343-370	436-483	611-690					
PVMA2_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	124-152								
PVMA2_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	124-151								
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	219-246								
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246								
PVMAT_INCJ	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	151-183								
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	247-274								
PVMAT_PIDHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	96-123								

PCGENE	107a17804	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	201-231								
PVMAT_PUB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PVMAT_PUJH	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	333-353								
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	175-209								
PVME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	175-209								
PVME1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	21-48	184-218							
PVME1_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-48	184-218							
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-48	184-218							
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE NR2)	21-48	184-218							
PVME1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KMB32)	184-218								
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	220-254	273-324	273-324						
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D1)	39-56	220-254							
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN EDC)	227-254	273-324							
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	220-254	273-324							
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	220-254	273-324							
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	220-254	273-324							
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	26-53	100-127							
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	4-31	78-118							
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328								
PVMTI_DHVII	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	18-63	231-264							
PVMT9_MYXVL	M-T9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	163-190								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	465-492								
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	83-113								
PVNCN_PAVBO	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	149-176								
PVNCS_ADVG	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	86-148								
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002)	114-41	279-339	487-517	585-612	780-817	821-848			
PVNCS_MUMIM	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	35-62	262-289							
PVNCS_MUMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	35-62	262-289							
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	236-270								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	35-62								
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-55	169-196	316-346						
PVNS1_BHDV2	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN ALBERTA)	411-438								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	171-198								
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-198								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	171-198								
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	171-198								
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	168-195								
PVNS1_IADA3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	171-198								
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	171-198								
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-198								
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	171-198								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	171-198								
PVNS1_IAPI9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	171-198								
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GILIT/1492-B/82)	171-198								
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	171-198								
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	171-198								
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	171-198								
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	171-198								
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	171-198								
PVNS2_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	87-114								
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78								
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	51-78								
PVNS2_INCJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98								
PVNS3_CVPFS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772/70)	9-36								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	9-36								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	6-40								
PVNS7_CVCAE	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-45								

FCGENE	10711784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS								
PVNS7_CVFE1	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	8-42							
PVNS7_CVPFS	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772)	34-61							
PVNS7_CVPPU	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD)	34-61							
PVNS7_CVPRA1	NONSTRUCTURAL PROTEIN 7	PORCINE RESPIRATORY CORONAVIRUS	34-61							
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	8-42							
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14(83)	41-75							
PVNSC_PIJH4	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-99							
PVNSM_ONSV	NONSTRUCTURAL PROTEIN NS-M	IMPATIENS NECROTIC SPOT VIRUS	262-296							
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	57-84							
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS	146-180							
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	331-369							
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRINSORI/2695/76)	378-405							
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	378-405							
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	378-405							
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	378-405							
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	378-405							
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	378-405							
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	378-405							
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80)	378-405							
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	378-405							
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-405							
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/0)	378-405							
PVNUC_IADE2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	378-405							
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	378-405							
PVNUC_IADM3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MALEKPHIS/928/74)	378-405							
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	378-405							
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	378-405							
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	378-405							
PVNUC_IAEN3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	378-405							
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	378-405							
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	378-405							
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	378-405							
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	378-405							
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-405							
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	378-405							
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-405							
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	378-405							
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/181/79)	378-405							
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	378-405							
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	378-405							
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	378-405							
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/X-40)	378-405							
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	378-405							
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	378-405							
PVNUC_IAHM3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	378-405							
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	378-405							
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/3/83)	378-405							
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	378-405							
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	378-405							
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	378-405							
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	378-405							
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	378-405							
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	378-405							
PVNUC_IAMKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	378-405							
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	378-405							
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	378-405							
PVNUC_IAOH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	378-405							

PCGENE	107x178x4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS								
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	378-405							
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-405							
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)	378-405							
PVNUC_IASEO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	378-405							
PVNUC_IASH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	378-405							
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	378-405							
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	378-405							
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	378-405							
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/SOUTH AFRICA/61)	378-405							
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/TURKMENIA/1/72)	378-405							
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	378-405							
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-405							
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	378-405							
PVNUC_IAVIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	378-405							
PVNUC_IAWIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WIN/1/EMAIN/32/84)	378-405							
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/1/76)	378-405							
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	378-405							
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	378-405							
PVNUC_IAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	378-405							
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	378-405							
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CANADA/IDGF/1/35)	378-405							
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	378-405							
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	378-405							
PVNUC_IAZH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	378-405							
PVNUC_IAZH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1256/82)	378-405							
PVNUC_IAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	378-405							
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1/30)	378-405							
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	378-405							
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	378-405							
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	378-405							
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	378-405							
PVNUC_IAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	378-405							
PVNUC_IAZJ5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	378-405							
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAEGERSBURG/42)	378-405							
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	378-405							
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	378-405							
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/55)	378-405							
PVNUC_IAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	378-405							
PVNUC_IAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	378-405							
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	378-405							
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	378-405							
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	416-443	451-478					
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	366-407							
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	366-407							
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37	109-138	581-608					
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	7-37	109-138	581-608					
PVOR1_FDMV	132 KD PROTEIN	FOXTAIL MOSAIC VIRUS	1023-1050							
PVOR1_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	996-1023	1527-1561						
PVOR1_PMV	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS	948-978	1481-1512						
PVOR1_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	597-627							
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	698-725	1017-1044						
PVOR1_PVXXJ	165 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	698-725	1017-1044						
PVOR1_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	312-342	691-721						
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	7-41							
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-48							
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	6-33	37-64						

PCGENE	107x17x14	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS									
PVP10_RGDV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS	205-252								
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS	151-181	227-254							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS	53-80								
PVP12_WTV	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS	81-108								
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ)	81-108								
PVP19_AMCV	CORE PROTEIN P19	ARTICHOKE MOTTLED CRINKLE VIRUS	73-100								
PVP19_TBSVC	CORE PROTEIN P19	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	73-100								
PVP23_HSV5A	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN 11)	2-29								
PVP26_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVP26_HSV5A	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	48-75								
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	277-304	410-437	632-662	907-934					
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	815-846								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	898-925								
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-146								
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	72-103	415-453							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	39-94	523-553							
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	39-94	524-554							
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	70-101	533-567							
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	52-99	128-136	518-545	705-746					
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96								
PVP30_ASFE7	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75)	39-75								
PVP33_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	83-119								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	80-107	231-258							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	80-107	231-258							
PVP35_NPVAC	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	270-297								
PVP35_NPVBM	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	68-102								
PVP35_VACCV	IMMUNODOM ENV PRO P35	VACCINIA VIRUS (STRAIN WR)	178-205								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	134-161	264-291							
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	263-290								
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	132-159								
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-252								
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-252								
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	214-253								
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	209-243	793-832							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AUSTRALIA)	798-832								
PVP3_GFLV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS	99-133								
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	39-66	329-384							
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	38-67	350-377	451-497	619-692					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVP40_HSV5A	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	205-232	344-372							
PVP40_LTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	515-549								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-208	495-522							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	589-619							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	584-622							
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75								
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	48-75								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	48-75								
PVP4B_FOWPV	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	80-110								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	7-37								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	7-37								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	34-61	576-603							
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	34-61	576-603							
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	34-61	576-603							
PVP4_BTV2A	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	553-622								
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	595-639								

PCGENE	107a17b14	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS									
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	8-35	384-622							
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	595-629								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	112-146	235-269	552-629						
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	5-32								
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	8-35	572-628							
PVP4_ROTHI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	8-35	279-306	565-621						
PVP4_ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	112-139	584-629						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	279-306	565-621						
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	8-35	279-306	565-621						
PVP4_ROTIU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	111-138							
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	77-104	279-306	577-621					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	8-35	279-306	565-621						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	8-35	572-610							
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN3)	8-35	573-628							
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	8-35	577-621							
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	8-38	105-135	235-262						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	8-35	572-627							
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	8-35	239-306	590-617						
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	8-35	577-621							
PVP4_ROTP3	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	584-623							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	5-33	115-161	293-320						
PVP4_ROTPO	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	8-35	572-628							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	8-35	112-146	584-625						
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	8-38	584-622							
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	8-35	589-619							
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	8-35	130-157	584-622						
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	28-62								
PVP5_AHSV4	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	113-183	191-218							
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	53-80	99-126							
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	53-80	92-126							
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	53-80	89-126							
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	53-80	92-126	148-182						
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	53-80	89-126							
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	53-80	191-218	399-426						
PVP5_EHDV1	OUTER COAT PROTEIN P5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	648-675								
PVP5_WTV	VP6 PROTEIN	WOUND TUMOR VIRUS	161-193								
PVP61_BTV10	PROB NONSTRUCT 41.0 KD PRO	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	153-202								
PVP61_MRDV	61 KD PROTEIN	MAIZE ROUGH DWARF VIRUS	36-63								
PVP61_NPVAC	VP6 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	137-189								
PVP62_BTV10	MAJOR ENV GLYCOPRO PRECURSOR	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	45-72								
PVP64_NPVOP	MAJOR ENV GLYCOPRO PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	44-81								
PVP67_NPVAC	MAJOR ENV GLYCOPRO PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	137-189								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	137-189								
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	137-189								
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	137-189								
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	161-193								
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	133-172								
PVP6_RDV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS	10-37	354-381							
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	413-440								
PVP75_HSV5A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	929-977							
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-78	370-397							
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	16-43								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	458-485								
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	101-142	240-298							
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	132-159								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	105-132								
PVP8_FOWPV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	211-238								

PCGENE	10/31/94	All Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS								
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	29-56	112-143						
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	197-224							
PVP9_WTV	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS	22-49							
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ)	22-49							
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	196-223							
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	127-186	238-265						
PVPRT_ADEM1	ENDOPROTEASE	MOUSE ADENOVIRUS TYPE 1	167-194							
PVPU_HV1A2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	3-31							
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HTLV IIIB AND IIIB33 ISOLATES)	5-48							
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	21-48							
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-49							
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	5-48							
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-30							
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33							
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	5-48							
PVPU_HV1J5	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (J5 ISOLATE)	2-29							
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	22-49							
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	5-32							
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33							
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	5-48							
PVPU_HV1S1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49							
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78							
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	64-94							
PVRNA_B5MV	ALPHA A PROTEIN	BARLEY STRIPE MOSAIC VIRUS	1031-1078							
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-43							
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV)	114-144							
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	28-55							
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS	9-44							
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-44							
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	2-29							
PVS07_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	91-146	199-236						
PVS07_ROTP5	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	91-146	202-236						
PVS07_ROTS1	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	91-146	199-236						
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NS5/VP9	BOVINE ROTAVIRUS (STRAIN UK)	164-201							
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	164-201	217-251						
PVS09_ROTB4	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-29							
PVS09_ROTB5	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-29							
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-29							
PVS09_ROTGA	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN ADRV)	210-237							
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-29							
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	2-29							
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G7 / STRAIN B37)	2-29							
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	2-29							
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	2-29							
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-29							
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-29							
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	2-29							
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	2-29							
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-29							
PVS09_ROTP2	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT76)	2-29							
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	2-29							
PVS09_ROTS1	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-29							
PVS10_ROTBS	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	125-152							
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	113-140							
PVS11_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	13-40	114-145						
PVS11_ROTBV	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN VM/RU)	13-40	114-145						
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	31-60							

PCGENE	107a178d	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS11_ROTH5	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	13-40	111-145							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	13-40	111-145							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145								
PVS11_ROTRA	MINOR OUTER CAPSID PROTEIN	RABBIT ROTAVIRUS (STRAIN ALABAMA)	118-145								
PVS11_ROTSI	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-146								
PVSH_MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS	9-46	•							
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	12-41								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	9-41								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-46								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE)	9-46								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	12-41								
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	9-41								
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	12-41								
PVS11_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	26-63	71-122	127-168	222-259					
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	4-104	170-193							
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	4-52	75-104	112-160						
PVS12_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-384								
PVS13_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	289-316								
PVS15_REOVD	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	90-117								
PVS15_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	50-77								
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	124-158								
PVT5_SFVKA	PROTEIN T5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	230-277								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	176-203								
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	710-737								
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	394-421								
PVTP1_TTV1V	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN VT1)	169-196								
PVTPX_TTV1	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	169-196								
PVV_PIHA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PY100_SSV1	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	25-65								
PY108_SSV1	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-61								
PY119_SSV1	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-78								
PY11K_TYDVA	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	33-87								
PY13K_NPVAC	HYPOTH 13.1 KD IN 39 KD 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	85-112								
PY13K_SSV1	HYPOTHETICAL 13.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	59-86								
PY14K_SSV1	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39								
PY16K_NPVAC	HYPOTH 16 39 KD PROTEIN 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	80-107								
PY16K_SSV1	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	77-111								
PY17K_SSV1	HYPOTHETICAL 17.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	9-36	119-153							
PY18K_MSVN	HYPOTHETICAL 17.7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	34-61								
PY18K_MSVS	HYPOTHETICAL 17.2 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	34-61								
PY20K_SSV1	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	76-103								
PY28K_SSV1	HYPOTHETICAL 28.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	93-164								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	118-148								
PY31K_SSV1	HYPOTHETICAL 31.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	24-97								
PY33K_SSV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	233-267								
PY38K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	153-184								
PY3_SOCMV	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-149								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94								
PY85K_SSV1	HYPOTHETICAL 85.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-121	546-573	638-700						
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	13-40								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	74-108	132-179	184-218						
PYB05_FOWPM	HYPOTHETICAL BAMHI-ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	62-89								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-197	214-241							

FCGENE	107x171x4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	11-38								
PYB13_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	128-167								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	87-116								
PYDH1_HSV67	HYPOTH 24.1 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	161-188								
PYDH1_HSV5C	HYPOTH 28.7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	52-82								
PYDH4_HSV5C	HYPOTH 19.9 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PYF16_FOWP1	HYPOTHETICAL 23.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	8-35								
PYF30_FOWP1	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	170-204								
PYH32_VACCV	HYPOTH 31.7 KD HINDIII-C PRO	VACCINIA VIRUS (STRAIN WR)	37-64	95-126	144-171						
PYHBJ_VACCV	HYPOTH HOST RANGE 27.4 KD PRO	VACCINIA VIRUS (STRAIN WR)	31-58	179-206							
PYKB2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYKR4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYL15_ADE41	HYPOTH 12.4 KD IN 33 KD REGION	HUMAN ADENOVIRUS TYPE 41	47-86								
PYLR1_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-54								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	94-143								
PYOR3_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	35-76								
PYORJ_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	64-94								
PYORJ_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	65-95								
PYORJ_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS)	92-119								
PYORA_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	23-57								
PYORL_TTV1	HYPOTHETICAL 26.8 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	15-42								
PYORQ_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-31								
PYORW_TTV1	HYPOTHETICAL 12.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	4-40								
PYP12_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	44-71								
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	44-71								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	59-101	106-157							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	51-101	106-157							
PYP46_RTBV	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	58-107	197-231							
PYP46_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	58-107	197-231							
PYP63_NPVAC	HYPOTH PRO P6.3 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-71								
PYP63_NPVOP	HYPOTH 40.0 KD IN P6.3 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	325-352								
PYPOH_NPVAC	HYPOTH 23.6 KD IN POLYHEDRIN 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	116-153								
PYPOL_DNVN	HYPOTHETICAL 17.0 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	5-32								
PYQ3_AMEPV	HYPOTHETICAL PROTEIN IN TK 3'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS	8-57	59-96	136-183						
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	208-235								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	223-257	268-299							
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	141-168								
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	404-441								
PYRP2_IRV6	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS	10-45								
PYVAG_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-34								
PYVAH_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-112								
PYVDB_VACCC	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-77								
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-77								
PYVDH_VACCV	HYPOTHETICAL 7.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	20-50								
PYVGB_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-44								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	132-179								

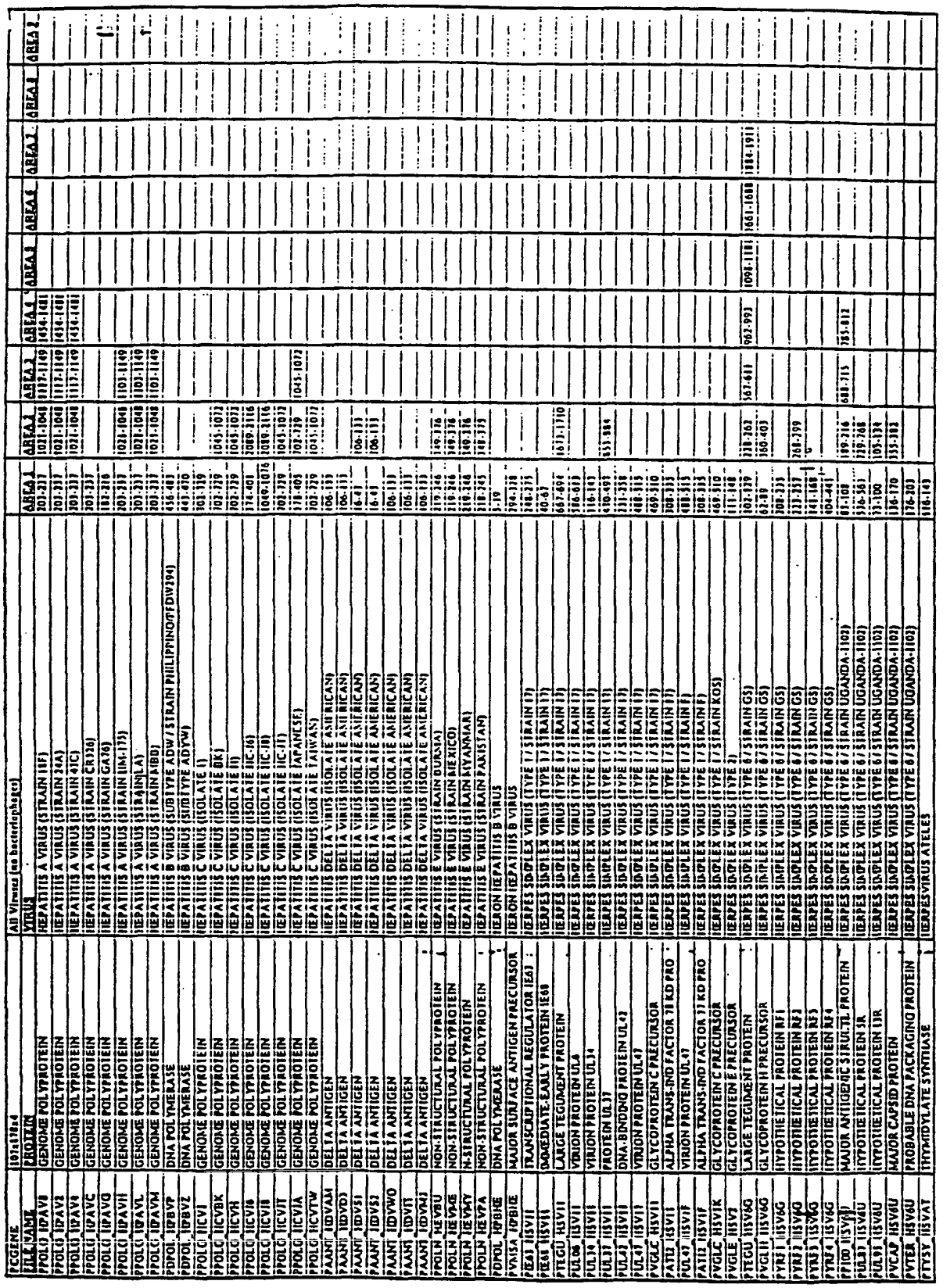
TABLE VII

107 X 178 X 4 SEARCH RESULTS SUMMARY

FOR ILLUSTRATIVE PURPOSES ONLY

PEGLINE	ENTRIES	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PMOL_MGVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	413-480								
PENV_MGVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	337-344								
PMOL_MGVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	805-833								
PMYC_AVIMJ	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	335-368	375-402							
PMYC_AVIMD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS HB1	335-367	376-403							
PMYC_AVIMC	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	335-367	376-403							
VL1_FPVC	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FAV-L	38-63								
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	417-454								
PRLU_HSVB1	RIBONUCLEOSIDE DIPHOSPHATE REDUCTASE SMALL CHAIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN BA)	96-137								
PVGLD_HSVB1	GLYCOPROTEIN D-I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN BA)	417-454								
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-46	344-603	631-695						
PENV_BIV21	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-46	333-633	666-728						
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	104-137								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDN)	104-137								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	104-137								
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB313)	111-137								
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB39)	104-137								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE OLV-1)	104-137								
PHEMA_PIJB	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PRAPP_PIJB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	14-91	283-314							
PVGLF_PIJB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-142	207-241	459-497						
PMAT_PIJB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PRPP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-131								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-63	154-202	216-243	442-469	486-511				
PMMAT_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	126-152								
PMMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	210-246								
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR F	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-63	154-202	216-243	442-469	486-511				
PVGLG_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-121								
PVGLF_BRSVK	FUSION GLYCOPROTEIN PRECURSOR F	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-63	154-202	216-243	444-471	488-515				
PENV_BLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	116-149								
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	333-369	516-564	626-654					
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	11-38								
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	342-369	618-685							
PVEJ_CRPVK	PROBABLE E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	5-14								
VL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-381								
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE 3275/90)	1116-1815	1890-1913	2049-2076	2982-3016	3117-3143				
PPOLG_DEN1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN 16681)	1364-1391	1838-1885	1908-1935	2981-3015	3116-3142				
PPOLG_DEN1J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN 16681-PDK53)	1364-1391	1838-1885	1908-1935	2981-3015	3116-3142				
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	1364-1391	1838-1885	1908-1935	2981-3015	3116-3142				
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	1364-1391	1838-1885	1908-1935	2979-3013	3114-3140	3141-3170			
PPOLG_DEN3T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN TONGA 1974)	1364-1391	1838-1885	1908-1935	2979-3013	3114-3140	3141-3170			
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	1114-1141	1488-1535							
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	837-864	1342-1389	1837-1884	2694-2721	2980-3014	3145-3172			
PDPOL_I07BDD	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 51)	885-1910	1913-1931	1941-1969						
PDPOL_I07BDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-19								
PDPOL_I07BDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE 333)	5-19	104-131							
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1244-1271	(1876-1903)					
PUL05_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	311-340	342-369						
PUL11_EBV	HYPOTHETICAL PROTEIN BGLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	13-42								
PUL13_EBV	PROB DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	185-212	907-934							
PUL17_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	409-436								
PUL19_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	166-196							
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVGL2_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-103								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	93-121								
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	569-596	611-638							
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP125	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149	619-648							

PCGENE		All Viruses (no bacteriophage)									
IDENTIFIER	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FULLNAME	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PV940_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	214-290								
PVTEA_EBV	HYPOTHETICAL BKRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-111								
PVKR3_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PVKR4_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	37-114								
PVLR1_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	153-179								
PVZL3_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	197-220								
PBZLF_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	917-1004	1041-1068							
PDNBI_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	35-81								
PEA_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-173								
PLM01_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	194-211								
PLM03_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-173								
PLM01_EBVA	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJI)	148-173								
PUL37_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	145-175								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HV5334)	443-470	934-961							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	443-470	934-961							
PATI3_HSVEB	ALPHA TRANS-IND FACTOR 63 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	154-181								
PATIN_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	331-348							
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PRDR1_HSVEB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	329-356	506-533	1205-1232						
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	660-687								
PUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	287-314								
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	155-180								
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL27_HSVEB	GENE 33 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	115-249	917-1014							
PUL32_HSVEB	DNA REPLICATION PROTEIN UL32	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	193-220	943-970							
PVGGJ_HSVEB	GENE J PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	283-310								
VGM_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	141-114								
PVP16_HSVEB	CAPSID PROTEIN VP16	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	16-61								
PVGGJ_HSVEK	GENE J PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	931-960							
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and KyA)	113-139								
PUL47_HSVEA	91 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1	190-217								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	416-443	616-643							
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513								
PDUT_HSVE4	DEOXYU T-TRIPHOSPH NUCLEOTIDOHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	331-358								
PVEJ_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	96-117								
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	130-150	630-650							
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	443-473	939-969							
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	679-668	720-747							
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-639	721-748							
PENV_FLVCG	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	109-138								
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	391-420								
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-420								
PENV_FLVOL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519								
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-D1)	310-339								
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516								
PENV_MLVFS	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	331-357								
PENV_MLVF1	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD57)	331-357								
PENV_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	331-331								
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-201	337-364							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	126-444	411-434							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703							
PDPOL_HPBG3	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	231-333								

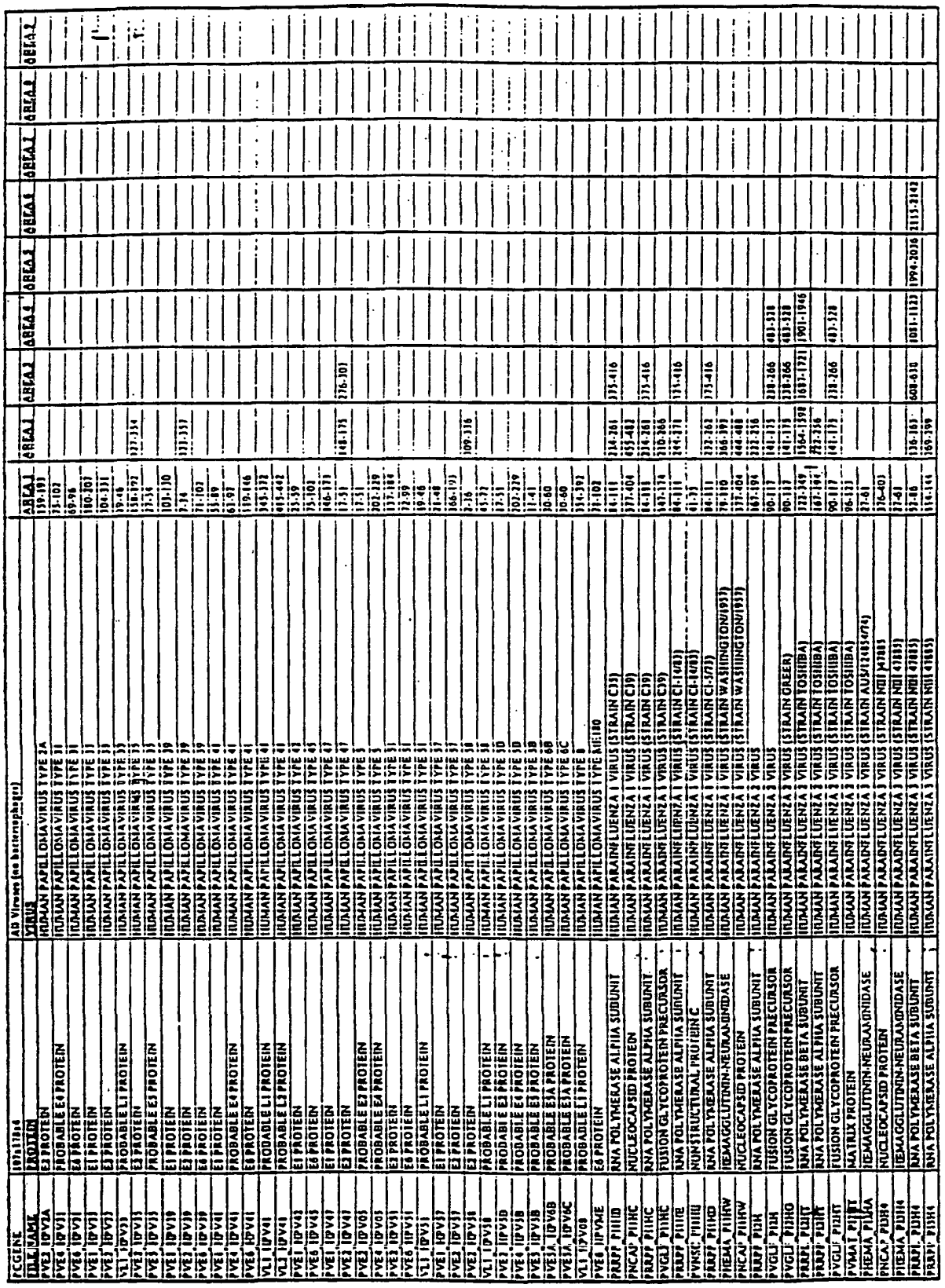


PCGENE	107a1784	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLD_HDAV0	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	201-337	1021-1068	1117-1149	1414-1441					
PPOLD_HDAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	201-337	1021-1068	1117-1149	1414-1441					
PPOLD_HDAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 41C)	201-337	1021-1068	1117-1149	1414-1441					
PPOLD_HDAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	201-337								
PPOLD_HDAVQ	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	182-318								
PPOLD_HDAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	201-337	1021-1068	1103-1149						
PPOLC_HDAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	201-337	1021-1068	1103-1149						
PPOLC_HDAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBD)	201-337	1021-1068	1103-1149						
PDPOL_HDBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO7FDW194)	416-483								
PDPOL_HDBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	441-510								
PPOLC_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	383-439								
PPOLC_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	192-339	1043-1072							
PPOLC_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	192-339	1043-1072							
PPOLC_HCV1B	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	174-401	1089-1116							
PPOLC_HCV1B	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	1049-1076	1089-1116							
PPOLC_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	383-439	1043-1072							
PPOLC_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	178-405	1043-1072	1045-1072						
PPOLC_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	383-439	1043-1072							
PAANT_HDVAAJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	106-133								
PAANT_HDVD3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	106-133	106-133							
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	16-41	106-133							
PAANT_HDVS3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	16-41	106-133							
PAANT_HDYW0	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	106-133								
PAANT_HDVT1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	106-133								
PAANT_HDVAJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTIGEN)	106-133								
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	119-346	149-176							
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	119-346	149-176							
PPOLN_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	119-346	149-176							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	118-345	148-175							
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	1-19								
PVP15A_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	194-218								
PEA1_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	344-375	1-61							
PTEGU_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	10-61								
PUL06_HSV11	LARGE TEGUMENT PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1611-1710							
PUL36_HSV11	VIRION PROTEIN UL36	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-611	116-143							
PUL37_HSV11	VIRION PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	490-517	553-584							
PUL42_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	111-338								
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	408-435								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PATD_HSV11	ALPHA TRANS-IND FACTOR 71 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	668-695								
PUL49_HSV1F	VIRION PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	408-435								
PATID_HSV1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	668-695								
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-142								
PTEGU_HSV2G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	102-129	338-362	567-611	963-993	1093-1111	1661-1688	1884-1911		
PVGLI_HSV2G	GLYCOPROTEIN I PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	62-89	380-401							
PYRT1_HSV2G	HYPOTHETICAL PROTEIN RT1	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	208-235								
PYRJ1_HSV2G	HYPOTHETICAL PROTEIN RJ1	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	137-157	264-299							
PYRJ5_HSV2G	HYPOTHETICAL PROTEIN RJ5	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	141-168								
PYRT4_HSV2G	HYPOTHETICAL PROTEIN RT4	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	404-441								
PP100_HSV2G	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	87-108	189-216	685-715	785-812					
PUL31_HSV2U	HYPOTHETICAL PROTEIN UL	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	336-361	378-404							
PUL51_HSV2U	HYPOTHETICAL PROTEIN UL	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	93-120	165-194							
PVCAP_HSV2U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	136-170	333-382							
PVTEA_HSV2U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	176-203								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	118-145								

ACCESSION	DESCRIPTION	AD Viruses (an bacteriophage) VIRUS	AREA1	AREA1	AREA1	AREA2	AREA4	AREA1	AREA1	AREA2
DPOL_HSV3A	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	623-652							
DPOL_HSV3A	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	179-211							
DUT_HSV3A	DEOXYU 5'-TRIPHOSPH NUCLEOTIDOLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	418-449							
HELI_HSV3A	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	96-85	482-522						
PIC10_HSV3A	PROBABLE PROC A TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN 11)	48-78							
PIE66_HSV3A	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	160-186							
PKITH_HSV3A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	324-351							
PRR1_HSV3A	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	324-607	672-700	777-814	846-898	949-986	990-1017	1463-1497	2102-2133
PTEGU_HSV3A	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-147							
PTSY_HSV3A	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	115-42	102-138	168-402					
PUL06_HSV3A	VIRION GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	104-131	163-189					
PUL13_HSV3A	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	200-235							
PUL17_HSV3A	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	31-65	685-717						
PUL17_HSV3A	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-157							
PUL19_HSV3A	PROB DNA REP GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	9-36							
PUL21_HSV3A	HYPOTHETICAL GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	582-609							
PUL21_HSV3A	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	92-121							
PUL91_HSV3A	HYPOTHETICAL GENE 11 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	135-162							
PUNG_HSV3A	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	169-199							
PVCAP_HSV3A	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165							
PVG45_HSV3A	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394							
PVG48_HSV3A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74							
PVG55_HSV3A	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	388-415							
PVGLI1_HSV3A	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	80-107							
PVMP_HSV3A	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	1-29							
PVP21_HSV3A	PROBABLE CAPSID PROTEIN VP21	HERPESVIRUS SAIMIRI (STRAIN 11)	46-73							
PVP26_HSV3A	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	305-332	344-372						
PVP40_HSV3A	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	939-977						
PVP55_HSV3A	PROBABLE MEMBRANE ANTIGEN 55	HERPESVIRUS SAIMIRI (STRAIN 11)	133-168	511-539						
PDNB1_HSV3A	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	131-156							
PCGH2_HSV3A	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	181-188							
PYDIII_HSV37	HYPOTH 24.1 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484.77)	13-41							
PYDIII_HSV3C	HYPOTH 28.7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	51-85							
PYDIII_HSV3C	HYPOTH 99 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	516-540							
PENV_MLVID	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	133-160							
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	394-324							
PIC10_HCMVA	PROB PROC A TRANSPORT PRO UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-59							
PIR5_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	14-163							
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-43							
PIR15_HCMVA	HYPOTHETICAL PROTEIN IRL15	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-649							
PRR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1351-1381	2202-2230						
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47							
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374							
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-113							
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61							
PUL20_HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-134	334-364						
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	335-362							
PUL33_HCMVA	HYPOTHETICAL PROTEIN UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-141	441-481	765-790	802-833				
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-186							
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-101							
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	63-91							
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-73							
PUL71_HCMVA	UL71 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	45-79							
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-53	116-141						
PUL91_HCMVA	PROTEIN UL91	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	23-71							
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-31	441-477						
PUL94_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13-78							
PUL99_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								

PCGENE	10x10x4	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PUL00_HCMVA	HYPOTHETICAL PROTEIN UL10	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	90-124								
PUS00_HCMVA	HYPOTHETICAL PROTEIN US01	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-47								
PUS11_HCMVA	HYPOTHETICAL PROTEIN US11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1771-308								
PUS11_HCMVA	MEMBRANE PROTEIN US11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1991-318								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	15-88	397-424	440-467	551-578					
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1867-116	170-197							
PVGL_HCMVA	UE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	67-111								
PVTEI_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PDNB_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	111-464								
PVI0K_HCMVE	10 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	1894-211								
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	50-88	397-424	433-460	1533-879					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-133								
PENV_HVIA2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)	344-591	610-681	790-833						
PGAG_HVIA2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)	91-118								
PPOL_HVIA2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)	2118-245	610-681							
PVPU_HVIA2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)	1-31								
PVPU_HVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 AND HXB3 ISOLATES)	1-41								
PENV_HVIB1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	343-594	611-681	791-838						
PPOL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	330-357	617-671							
PPOL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	330-357	617-671							
PENV_HVIB0	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	360-589	626-678	786-833						
PVPU_HVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	11-41								
PENV_HVIBN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	1867-394	118-165	563-590	618-679	787-833				
PVPU_HVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	27-49								
PENV_HVIBR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	1550-599	678-688	796-833						
PPOL_HVIBR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	1330-357	1612-671							
PVPU_HVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	1-48								
PENV_HVIC4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	1397-424	1537-606	643-693	801-833					
PVPU_HVIC4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	1-30								
PENV_HVIEL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1335-396	1116-413	1543-591	628-680					
PNEF_HVIEL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119								
PPOL_HVIEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	2117-244	624-660							
PVPU_HVIEL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33								
PENV_HVIH2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	343-594	611-681	791-838						
PPOL_HVIH2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	330-345	630-661	921-951						
PVPU_HVIH2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	5-41								
PENV_HVIH3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NXB) ISOLATE)	343-594	611-681	791-838						
PENV_HVIH3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HAN) ISOLATE)	1350-377	556-603	643-694	803-839					
PGAG_HVIH3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HAN) ISOLATE)	91-118								
PVPU_HVIH3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HAN) ISOLATE)	2-29								
PENV_HVIIR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	1336-363	612-615	787-811						
PPOL_HVIIR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	1332-349	634-665							
PVPU_HVIIR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE)	13-49								
PENV_HVIMA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	1343-595	611-707	794-825						
PPOL_HVIMA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	1337-344	616-110	618-660						
PVPU_HVIMA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	1-32								
PENV_HVINT	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NSFA ISOLATE)	1340-592	609-681	789-816						
PENV_HVINON	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NON ISOLATE)	1343-370	1367-595	672-814	791-819					
PGAG_HVINON	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NON ISOLATE)	87-118								
PPOL_HVINON	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NON ISOLATE)	1211-244	1611-664							
PENV_HVIND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	1349-380	1536-581	1611-671	781-811					
PNEF_HVIND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	111-119								
PPOL_HVIND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	2117-244	624-660							
PVPU_HVIND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33								
PENV_HVIN5	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	326-360								
PPOL_HVIN5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	218-245	631-661							
PENV_HVIOY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	344-591	610-704	789-830						

PGGENE	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILE NAME	VIRUS	218-245	620-681						
PPOL_HV1OY	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	345-594	631-681	791-818					
PENV_HV1PV	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	218-237	637-673						
PPOL_HV1PV	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	3-40							
PVPU_HV1PV	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	210-307	231-238	514-601	640-693	800-833			
PENV_HV1RH	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NP/RAT ISOLATE)	217-244	619-660						
PPOL_HV1RH	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NP/RAT ISOLATE)	61-89							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	218-265	545-593	631-683					
PENV_HV13C	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	333-361	536-583	632-674	781-809				
PENV_HV1S1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	21-49							
PVPU_HV1S1	VPU PROTEIN	340-389	627-679	787-813					
PENV_HV1S1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF2) ISOLATE)	274-301	535-598	637-677	776-824				
PENV_HV1KB	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE 1	211-244	511-540	619-660					
PPOL_HV1U4	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	211-244	545-593	631-683	791-818				
PENV_HV1W1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	338-365	536-584	632-674	781-809				
PENV_HV1W2	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	336-361	536-584	632-674	781-809				
PENV_HV1Z8	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	186-207	573-601	634-678	797-828				
PENV_HV1Z2	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z3 ISOLATE)	235-256	543-591	634-680	796-830				
PPOL_HV1Z2	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z3 ISOLATE)	211-244	619-660						
PENV_HV1Z3	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	211-237	545-593	630-682	791-817				
PENV_HV1Z6	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	336-397							
PNEF_HV1Z6	NEGATIVE FACTOR	86-134							
PENV_HV1ZH	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	245-293	627-666	781-822					
PENV_HV2BE	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	537-591	621-648	633-693				
PGAG_HV2BE	GAG POLYPROTEIN	88-115							
PPOL_HV2BE	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-538							
PENV_HV2CA	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	334-361	623-650	655-699					
PPOL_HV2CA	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	61-88	533-590	593-682	644-688				
PENV_HV2D1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115							
PGAG_HV2D1	GAG POLYPROTEIN	107-600							
PPOL_HV2D1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	491-538							
PENV_HV2D3	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.3)	60-87	534-591	536-583	611-640	641-693			
PENV_HV2G1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	431-562							
PPOL_HV2G1	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	61-88	534-591	536-583	611-640	662-689			
PENV_HV2N2	ENV POLYPROTEIN	88-115							
PGAG_HV2N2	GAG POLYPROTEIN	431-539							
PPOL_HV2N2	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	58-85	533-592	622-698					
PENV_HV2R0	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	432-561							
PPOL_HV2R0	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	333-388	614-673						
PENV_HV2SB	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	413-561							
PPOL_HV2SB	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	442-476	537-594	559-586	648-693				
PENV_HV2ST	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115							
PGAG_HV2ST	GAG POLYPROTEIN	407-581							
PPOL_HV2ST	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	537-594	559-586	648-693				
PENV_HV2S3	ENV POLYPROTEIN	81-108							
PVE1_IDV11	PROBABLE E1 PROTEIN	10-60							
PVE1A_IDV11	PROBABLE E1A PROTEIN	137-184	534-581						
PVE1_IDV13	E1 PROTEIN	61-105	112-143						
PVE1_IDV16	E1 PROTEIN	66-93							
PVE1_IDV16	PROBABLE E1 PROTEIN	60-87							
PVE1_IDV18	E1 PROTEIN	313-340							
PVE1_IDV18	E1 PROTEIN	59-86							
PVE4_IDV11	PROBABLE E4 PROTEIN	75-107							
PVE4_IDV11	E4 PROTEIN	181-210							
VL1_IDV16	PROBABLE L1 PROTEIN	139-186							
PVE1_HPV1A	E1 PROTEIN	607-645							
VL1_HPV1A	PROBABLE L1 PROTEIN	21-48							
PVE1_HPV2A	E1 PROTEIN								

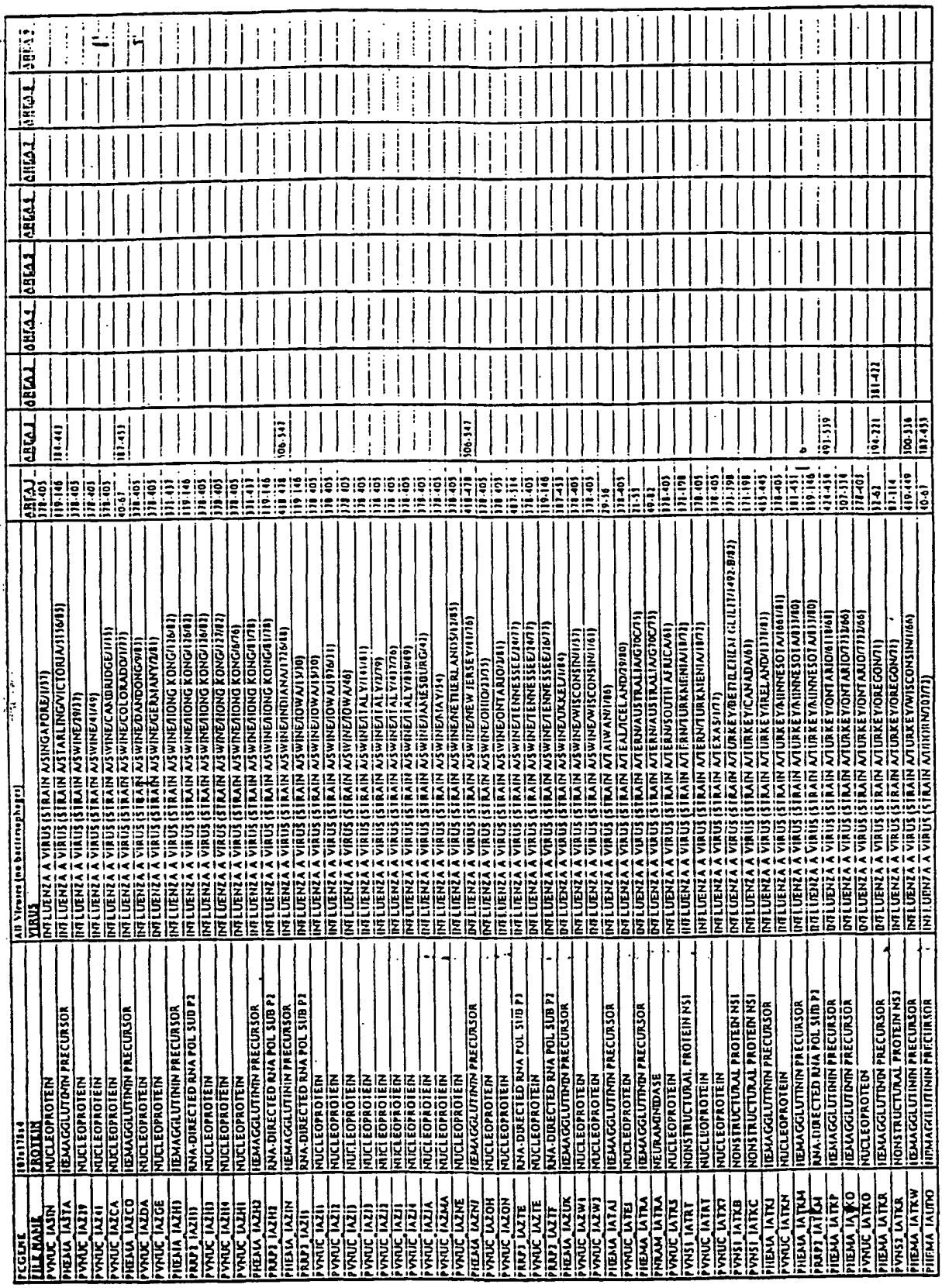


?GGENE	All Viruses (no bacteriophage)										
GLLNAME	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PVGLP_PIUH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	115-188	197-241	431-491						
PVMAT_PIUH4	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-233								
PVNSC_PIUH4	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	38-99								
PIEMA_PIUIV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/81)	27-61								
PIEMA_PIUIV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/49/80)	27-76								
PIEMA_PIUIU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9105/83)	27-76								
PIEMA_PIUIX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/51117/?3)	27-61								
PIEMA_PIUIW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/64117/79)	27-61								
PRPP_PIUIA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PVP_PIUIA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PRPP_IRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-140								
PNCAP_IRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PRPL_IRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192	210-237	667-694	788-815	1007-1034	1138-1165	1455-1480	1776-1803	2062-2089
PRPA_IRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PVGLP_IRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65	134-201	211-241	408-438					
PVM2_IRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	124-151								
PVMAT_IRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246								
PVGLG_IRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A50131?)	66-107								
PVGLG_IRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A50690)	241-?3?								
PVGLP_IRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A55-2)	38-65	134-201	211-241	407-431	408-438				
PRPP_IRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PVGLP_IRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	134-201	216-247	444-471	408-515				
PNCAP_IRSV1	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31	34-108	112-141						
PRPP_IRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PVGLP_IRSV1	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65	134-201	407-431	408-515					
PVGLG_IRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP D / STRAIN 18537)	63-93								
PVGLG_IRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP D / STRAIN 8060)	66-93								
PENV_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	340-376								
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	634-713								
PENV_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MIT-3)	341-376								
PENV_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	340-376								
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	634-713								
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-376								
PDPOL_HSVEI	DNA POLYMERASE	HERPESVIRUS 1 (STRAIN 17)	328-366	710-737							
PRR?4_HSVEI	GENE 74 PROTEIN KINASE	HERPESVIRUS 1 (STRAIN 17)	491-518								
PVG01_HSVEI	HYPOTHETICAL GENE 1 PROTEIN/DNA PRIMASE	HERPESVIRUS 1 (STRAIN 17)	11-38								
PVG11_HSVEI	HYPOTHETICAL GENE 11 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	117-204								
PVG18_HSVEI	HYPOTHETICAL GENE 18 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	134-205								
PVG22_HSVEI	HYPOTHETICAL GENE 22 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	333-400	581-622	668-701	766-818					
PVG24_HSVEI	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	31-58								
PVG28_HSVEI	HYPOTHETICAL GENE 28 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	233-290	497-538							
PVG34_HSVEI	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	93-122								
PVG37_HSVEI	HYPOTHETICAL GENE 37 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	440-469								
PVG39_HSVEI	HYPOTHETICAL GENE 39 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	631-671	1011-1115							
PVG46_HSVEI	PROBABLE MAJOR GLYCOPROTEIN	HERPESVIRUS 1 (STRAIN 17)	142-169	346-373	897-924	973-1007					
PVG51_HSVEI	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	HERPESVIRUS 1 (STRAIN 17)	34-61	87-114							
PVG56_HSVEI	HYPOTHETICAL GENE 56 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	582-609								
PVG63_HSVEI	HYPOTHETICAL GENE 63 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	530-584								
PVG64_HSVEI	HYPOTHETICAL GENE 64 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	477-504								
PVG65_HSVEM	HYPOTHETICAL GENE 65 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	1319-1331								
PVG66_HSVEI	HYPOTHETICAL GENE 66 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	161-?08								
PVG67_HSVEI	HYPOTHETICAL GENE 67 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	1342-1369								
PVG68_HSVEI	HYPOTHETICAL GENE 68 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	281-308								
PVG72_HSVEI	HYPOTHETICAL GENE 72 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	407-431								
PVG73_HSVEI	HYPOTHETICAL GENE 73 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	388-421								
PVG76_HSVEI	HYPOTHETICAL GENE 76 PROTEIN	HERPESVIRUS 1 (STRAIN 17)	200-237								
PVTER_HSVEI	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS 1 (STRAIN 17)	710-737								

PCGENE	All Viruses (no bacteriophage)							
FILE NAME	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PIEMA_IAHSW	HEMAGGLUTININ PRECURSOR	39-58	194-221	388-417				
PIEMA_IAAIC	HEMAGGLUTININ PRECURSOR	387-453						
PYNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	171-191						
PYNUC_IAANA	NUCLEOPROTEIN	338-403						
PRU3_IAANN	RNA-DIRECTED RNA POL SUB P3	119-146						
PYNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	171-191						
PYNUC_IAARN	NUCLEOPROTEIN	338-403						
PIEMA_IABAN	HEMAGGLUTININ PRECURSOR	24-51	177-417					
PNRAM_IABDA	NEURAMINIDASE	47-81						
PYNUC_IABRA	NUCLEOPROTEIN	338-403						
PIEMA_IABUD	HEMAGGLUTININ PRECURSOR	381-451						
PRU3_IABUD	RNA-DIRECTED RNA POL SUB P3	111-161						
PYNUC_IABUD	NUCLEOPROTEIN	338-405						
PYNUC_IACAL	NUCLEOPROTEIN	338-403						
PNRAM_IACAO	NEURAMINIDASE	33-64						
PIEMA_IACAO	HEMAGGLUTININ	9-36						
PIEMA_IACKA	HEMAGGLUTININ PRECURSOR	381-451						
PIEMA_IACKG	HEMAGGLUTININ PRECURSOR	11-58	182-441	494-538				
PYNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	171-190						
PYNUC_IACKG	NUCLEOPROTEIN	338-405						
PYNS1_IACKO	NONSTRUCTURAL PROTEIN NS1	166-185						
PIEMA_IACKP	HEMAGGLUTININ PRECURSOR	166-438						
PYNUC_IACKP	NUCLEOPROTEIN	338-405						
PIEMA_IACKQ	HEMAGGLUTININ PRECURSOR	166-438						
PIEMA_IACKV	HEMAGGLUTININ PRECURSOR	119-146	384-443					
PNRAM_IACHI	NEURAMINIDASE	16-43	16-91					
PRU3_IACIO	RNA-DIRECTED RNA POL SUB P3	111-159						
PYNS1_IACIU	NONSTRUCTURAL PROTEIN NS1	171-191						
PIEMA_IADA1	HEMAGGLUTININ PRECURSOR	381-451						
PNRAM_IADA1	NEURAMINIDASE	31-81						
PIEMA_IADA4	HEMAGGLUTININ PRECURSOR	28-56	418-478					
PIEMA_IADAJ	HEMAGGLUTININ PRECURSOR	433-453	499-543					
PYNS1_IADAJ	NONSTRUCTURAL PROTEIN NS1	171-191						
PIEMA_IADAJ	HEMAGGLUTININ PRECURSOR	381-451						
PYNUC_IADAU	NUCLEOPROTEIN	338-403						
PYNUC_IADDE	NUCLEOPROTEIN	338-403						
PIEMA_IADE2	HEMAGGLUTININ PRECURSOR	381-451						
PYNUC_IADE2	NUCLEOPROTEIN	338-403						
PYNUC_IADE1	NUCLEOPROTEIN	31-53	403-453	506-533				
PIEMA_IADE1	HEMAGGLUTININ PRECURSOR	338-403						
PYNUC_IADE3	NUCLEOPROTEIN	21-48						
PNRAM_IADGE	NEURAMINIDASE	31-81						
PIEMA_IADI7	HEMAGGLUTININ PRECURSOR	111-417						
PIEMA_IADI3	HEMAGGLUTININ PRECURSOR	111-417						
PIEMA_IADI1	HEMAGGLUTININ PRECURSOR	111-417						
PIEMA_IADI4	HEMAGGLUTININ PRECURSOR	111-417						
PIEMA_IADI2	HEMAGGLUTININ PRECURSOR	111-417						
PRU3_IADI2	RNA-DIRECTED RNA POL SUB P3	119-146						
PIEMA_IADI6	HEMAGGLUTININ PRECURSOR	111-417						
PYNUC_IADIK	NUCLEOPROTEIN	338-403						
PIEMA_IAGIA	HEMAGGLUTININ PRECURSOR	413-443						
PIEMA_IADMA	HEMAGGLUTININ PRECURSOR	11-58						
PYNUC_IADMA	NUCLEOPROTEIN	338-403						
PIEMA_IADM2	HEMAGGLUTININ PRECURSOR	21-56						
PIEMA_IADM3	HEMAGGLUTININ PRECURSOR	381-451						
PYNUC_IADM3	NUCLEOPROTEIN	338-403						

GENE	All Viruses (no bacteriophage)								
FILE NAME	VIRUS								
PHEMA_IADNY	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/17/78)	21-55							
PHEMA_IADNZ	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/17/76)	181-451							
PHEMA_IADNZ	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/17/76)	178-405							
PVNUC_IADNZ	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/17/76)	21-55							
PHEMA_IADUI	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	187-451							
PHEMA_IADUJ	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	178-405							
PVNUC_IADUJ	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	178-405							
PVNUC_IAEN5	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	40-67	187-451						
PHEMA_IAEN7	INFLUENZA A VIRUS (STRAIN A/ENGLAND/211/71)	24-51							
PHEMA_IAEN6	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/69)	186-451							
PHEMA_IAIAL	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/71)	29-56	194-221	388-457					
PHEMA_IAIC0	INFLUENZA A VIRUS (STRAIN A/EQUINE/2 DETROIT/1/64)	29-56	194-221	388-457					
PHEMA_IAIC6	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	29-56	194-221	388-457					
PHEMA_IAIC7	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/73)	29-56	194-221	388-457					
PNRAM_IAIC0	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/1/74)	197-224	388-457					
PHEMA_IAIDE	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-56	194-221	388-457					
PHEMA_IAIFO	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/16)	186-451							
PVNUC_IAIJI	INFLUENZA A VIRUS (STRAIN A/EQUINE/ILLINOIS/1/89)	178-405							
PNRAM_IAIK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	164-400					
PHEMA_IAIK7	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	186-451							
PHEMA_IAIK6	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	186-451							
PHEMA_IAIL6	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/86)	29-56	194-221	388-457					
PHEMA_IAILO	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/63)	29-56	194-221	388-457					
PRUP1_IAILO	RNA-DIRECTED RNA POL SUB P1	119-146							
PVNUC_IAILO	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/63)	178-405							
PHEMA_IAIM1	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	186-451							
PVNUC_IAIM1	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	178-405							
PHEMA_IAIN4	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-56	194-221	388-457					
PHEMA_IAIN4	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	186-451							
PHEMA_IAIPR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	29-56	194-221	388-457					
PRUP1_IAIPR	RNA-DIRECTED RNA POL SUB P1	111-361	480-501						
PVNUC_IAIPR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	178-405							
PHEMA_IAIRO	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	186-451							
PHEMA_IAISA	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/65)	186-451							
PHEMA_IAISP	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-56	194-221	388-457					
PHEMA_IAITE	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/56)	186-451							
PRUP1_IAITE	RNA-DIRECTED RNA POL SUB P1	119-146							
PVNUC_IAITE	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/56)	178-405							
PHEMA_IAITO	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	186-451							
PHEMA_IAIUR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	186-451							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198						
PVNUC_IAFOM	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-405							
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	111-198						
PVNUC_IAFOW	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	178-405							
PVNUC_IAFPD	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	178-405							
PHEMA_IAFPR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	177-331	384-443						
PRUP1_IAFPR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146						
PVNUC_IAFPR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	178-405							
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	197-224					
PHEMA_IAGRE	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	181-451							
PVNUC_IAGRE	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	178-405							
PHEMA_IAGUA	INFLUENZA A VIRUS (STRAIN A/GUILDAS TRAKIAN/33/84)	184-311							
PVNUC_IAGUA	INFLUENZA A VIRUS (STRAIN A/GUILDAS TRAKIAN/33/84)	178-405							
PVNUC_IAGU4	INFLUENZA A VIRUS (STRAIN A/GUILDMARYLAND/1815/79)	178-405							
PVNUC_IAGU5	INFLUENZA A VIRUS (STRAIN A/GUILDMARYLAND/1814/78)	178-405							
PVNUC_IAGUI	INFLUENZA A VIRUS (STRAIN A/GUILDMARYLAND/1/77)	178-405							
PHEMA_IAGU3	INFLUENZA A VIRUS (STRAIN A/GUILDMARYLAND/704/77)	503-533							
PRUP1_IAGU3	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/GUILDMARYLAND/704/77)	119-146						

GENE	10721764	All Viruses (no bacteriophages)							
NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-405						
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/1/80)	378-405						
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	378-405						
PHEMA_IAJAR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HARBIN/1/68)	39-56						
PVNUC_IAJDC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/1/40)	378-405						
PVNUC_IAJI01	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	378-405						
PVNUC_IAJI02	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/83)	378-405						
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	186-211						
PHEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	39-56	433-438					
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	10-31						
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	378-405						
PRDP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	335-402						
PRDP2_IAKOR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	119-146						
PRDP2_IALE1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146						
PRDP2_IALE2	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/135/57)	119-146						
PVNS1_IALE2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/135/57)	111-118						
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/191/57)	39-56	433-438					
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/191/57)	10-31						
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/191/57)	378-405						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/191/57)	111-118						
PHEMA_IALMA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	100-416						
PVNUC_IAMA4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	378-405						
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	393-455						
PRDP2_IAMAN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	119-146						
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	378-405						
PHEMA_IAMA0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	387-453						
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	40-63	387-453					
PNRAM_IAME1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	10-31	387-453					
PHEMA_IAMEJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	40-63	387-453					
PHEMA_IAME5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/5/76)	24-51	377-417					
PHEMA_IAMON	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	11-38	111-441					
PVNUC_IAMON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	378-405						
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/76)	378-405						
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	387-453						
PRDP2_IANT6	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	119-146						
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	378-405						
PVNUC_IAOH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/91)	378-405						
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	10-31						
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	378-405						
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/BARNEO/1/84)	393-454						
PRDP2_IAPI0	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	119-146						
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	111-118						
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	111-118						
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	39-56	433-438					
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	10-31						
PRDP1_IAPUE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	335-402						
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-405						
PHEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/7/76)	24-51						
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)	381-451						
PRDP1_IARUD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)	119-144						
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)	378-405						
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/60/85)	10-31						
PVNUC_IARUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/60/85)	378-405						
PHEMA_IAS63	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEALION/MASSACHUSETTS/1/80)	381-451						
PHEMA_IASH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEALION/MASSACHUSETTS/1/80)	381-451						
PVNUC_IASH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEALION/MASSACHUSETTS/1/80)	378-405						
PHEMA_IASW3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAWATER/AUSTRALIA/72)	381-451						
PVNUC_IASW3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAWATER/AUSTRALIA/72)	378-405						
PRDP2_IASIN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	119-146						



ECGENE	Identified	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	171-190								
PYNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-401								
PHEMA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	39-56	435-451							
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	10-81								
PYNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	171-190								
PYNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	378-405								
PHEMA_IAVIT	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	41-58	388-434							
PRNP1_IAVIT	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	119-146	337-354							
PYNUC_IAVIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/85)	378-405								
PNRAM_IAWDG	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILDFAIRE/56/84)	49-81								
PYNUC_IAWDN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILDFAIRE/56/84)	378-405								
PYNUC_IAWID	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILDFAIRE/PACIFIC OCEAN/1976)	378-405								
PHEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	324-377								
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	10-43								
PRNP1_IAWIL	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	119-146								
PYNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	378-405								
PYNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/1/61)	378-405								
PHEMA_IAXIA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XIANFENG/1/89)	39-56								
PRNP1_INBAC	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	117-134								
PRNP1_INBAC	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	2-31	417-509							
PRNP1_INBAD	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	164-194								
PRNP1_INBAD	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	2-31	417-509							
PHEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	100-131	418-481							
PHEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/4/1)	190-211	418-431							
PHEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	191-219	437-481							
PHEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	191-218	418-431							
PHEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	199-226	418-481							
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-33								
PYNS1_INBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	151-168								
PHEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	189-220	418-432							
PHEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/5/88)	193-224	433-476							
PHEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	198-229	437-481							
PYNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/9/78)	151-168								
PHEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	198-229	437-481							
PRNP1_INBSI	RNA-DIRECTED RNA POL SUB P2	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	137-164								
PHEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	191-222	416-474							
PHEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	100-131	419-483							
PHEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	193-224	433-476							
PYNS1_INBYA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/16/73)	151-78								
PRNP1_INCBE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	508-536								
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	495-531								
PYNUC_INCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	431-478							
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	493-519								
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	493-519								
PHEMA_INCGY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GYOGI/1/81)	493-518								
PRNP1_INCJ1	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	509-536								
PYMAT_INCJ1	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	151-185								
PYNS1_INCJ1	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98								
PHEMA_INCJI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	496-522								
PHEMA_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/82)	493-519								
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	493-518								
PHEMA_INCNA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/NAN/83)	493-518								
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	493-519								
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	493-519								
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	493-519								
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1/83)	493-519								
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/1/81)	493-519								

PECGENE	10747784	All Viruses (no bacteriophages)								
IDNAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81							
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-130	152-339						
PENV_MCFF	ENV POLYPROTEIN	KONK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	433-512							
PENV_MCFF1	ENV POLYPROTEIN	KONK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-3)	488-515							
PENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	102-543							
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-616							
PIE18_MCMVS	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	661-691							
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475						
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	265-288							
PVE1_PCPV1	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	263-294	322-361						
PVE1_PCPV1	PROBABLE E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	35-62							
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538							
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	805-832						
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	697-738							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-138	190-217						
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	411-462	1111-1138						
PGENO_IDAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	203-241	1035-1072	1115-1192					
PPOLG_IDAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	201-233							
PENV_SIVAI	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	289-330	361-388	593-619	632-659	697-724			
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	542-574	637-651					
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-72							
PENV_SIVAO	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	270-301	366-393	597-624	638-665	703-730			
PPOL_SIVAO	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	416-463	482-516	643-669					
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	71-98							
PENV_SIVSH	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (SIVSHA ISOLATE)	281-308	351-612	647-669	691-718				
PGAG_SIVSH	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (SIVSHA ISOLATE)	88-115							
PPOL_SIVSH	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (SIVSHA ISOLATE)	496-523							
PENV_SIVAJ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	237-291	316-332	548-603	634-708				
PGAG_SIVAJ	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	431-509							
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	76-117							
PPOL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	478-515							
VIF_SIVAJ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	2-36							
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	6-33	118-185	589-610	634-656				
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	337-364	618-670						
PENV_SIVAK	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	132-606							
PGAG_SIVAK	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	88-115							
PPOL_SIVAK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	533-560							
PENV_SIVAL	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	165-608							
PENV_SIVK1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE142 ISOLATE)	120-150	510-609	671-715					
PPOL_SIVK1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE142 ISOLATE)	132-160							
PENV_SIVM3	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE251 ISOLATE)	158-215	337-389						
PENV_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PDI/DC11 ISOLATE)	286-311	514-593	646-722					
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PDI/DC11 ISOLATE)	88-115							
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PDI/DC11 ISOLATE)	496-536							
PGAG_SIVSM3	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115							
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	3-30	268-298	590-617	631-658				
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	617-691							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	423-470							
PPOL_MPMS	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	574-612	650-697						
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	222-260							
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-139							
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728						
PRIR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146							
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609						
PUL14_VZVD	HYPOTHETICAL GENE 40 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101							
PUL11_VZVD	GENE 31 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407							

PCGENE	[07:17:34]	All Viruses (no bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2
PUL10_VZVD	VIRION GENE 10 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117:119								
PUL17_VZVD	GENE 17 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	101:134	485:512	119.746	976.1000					
PUL41_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	110:164								
PUL43_VZVD	GENE 13 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119:136	112:149							
PUL11_VZVD	PROB DNA REP GENE 8 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	101:133								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295:332								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174:208	485:512							
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201:431								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295:332								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	217:316								
PDPOL_WHV39	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 39	290:331								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	213:343	290:331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211:341	289:330							
PDPOL_WHV8I	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	213:343	290:331							

TABLE VIII

107 X 178 X 4 SEARCH RESULTS SUMMARY

FOR ALL VIRAL PROCARYOTIC PROTEINS

FOR ILLUSTRATIVE PURPOSES ONLY

PCGENE	107x178x4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
P120K_RICRI	120 KD SURFACE-EXPOSED PROTEIN	RICKETTSIA RICKETTSII	83-110	240-298	355-382	638-672	746-838	1168-1202			
P17K_RICTY	17 KD ANTIGEN PRECURSOR	RICKETTSIA TYPHI	67-94								
P190K_RICRI	190 KD ANTIGEN PRECURSOR (CELL SURFACE)	RICKETTSIA RICKETTSII	241-268	460-487	607-634	754-781	829-856	904-931	1220-1254	1544-1571	1723-1750
			2065-2098	2131-2168							
P22KD_DESMO	22.6 KD PROTEIN	DESULFUROCOCCUS MOBILIS	25-52	59-89	120-147						
P40KD_YIBAN	40 KD PROTEIN PRECURSOR	VIBRIO ANGUILLARUM	153-196								
P40M_ECOLI	40 KD INNER-MEMBRANE PROTEIN	ESCHERICHIA COLI	311-338								
P60M_PROMI	60 KD INNER-MEMBRANE PROTEIN	PROTEUS MIRABILIS	14-41								
P65KD_ZYMMO	65 KD PROTEIN	ZYMOMONAS MOBILIS	95-122	444-524							
P6PGD_BACSU	PROB 6-PHOSPHOGLUCONATE DEHYDROGENASE	BACILLUS SUBTILIS	24-51	218-246							
P6PGD_ECOLI	6-PHOSPHOGLUCONATE DEHYDROGENASE	ESCHERICHIA COLI	205-232								
P6PGD_SALTY	6-PHOSPHOGLUCONATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	205-232								
PAACA_STAAU	6'-AMINOGLYCOSIDE N-ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	450-477								
PAAT_BACSP	ASPARTATE AMINOTRANSFERASE	BACILLUS SP	146-173	185-212							
PAAT_ECOLI	ASPARTATE AMINOTRANSFERASE	ESCHERICHIA COLI	351-378								
PABC_ECOLI	ABC PROTEIN	ESCHERICHIA COLI	176-203								
PABIC_LACLA	ABORTIVE PHAGE RESISTANCE PROTEIN ABIC	LACTOCOCCUS LACTIS	85-126	170-204	209-273						
PACCR_AGRTU	TRANSCRIPTIONAL REPRESSOR ACCR	AGROBACTERIUM TUMEFACIENS	127-154								
PACEA_ECOLI	ISOCITRATE LYASE	ESCHERICHIA COLI	398-432								
PACON_BACSU	ACONITATE HYDRATASE	BACILLUS SUBTILIS	48-75								
PACON_ECOLI	ACONITATE HYDRATASE	ESCHERICHIA COLI	41-68	613-640							
PACOR_ALCEU	ACETOIN CATABOLISM REG PRO	ALCALIGENES EUTROPHUS	85-112								
PACP_ECOLI	ACYL CARRIER PROTEIN	ESCHERICHIA COLI	4-31								
PACRA_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN A PRECURSOR	ESCHERICHIA COLI	213-247								
PACRB_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN B	ESCHERICHIA COLI	520-551								
PACRF_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN F	ESCHERICHIA COLI	512-550	726-753							
PACT3_STRCO	PUTATIVE KETOACYL REDUCTASE	STREPTOMYCES COELICOLOR	137-184								
PACTA_LISMO	ACTIN-ASSEMBLY INDUCING PROTEIN PRECURSOR	LISTERIA MONOCYTOGENES	237-264	576-603							
PACVS_NOCLA	ACV SYNTHETASE	NOCARDIA LACTAMDURANS	3139-3163								
PADAA_BACSU	METHOSTRUESTER-DNA ALKYLTRANSFERASE	BACILLUS SUBTILIS	136-170								
PADDA_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT A	BACILLUS SUBTILIS	398-425	454-481	522-556	1005-1032					
PADDB_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT B	BACILLUS SUBTILIS	253-284	870-903	943-977						
PADH1_CLOAB	NADPH-DEPENDENT BUTANOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	284-311								
PADHA_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE A	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHB_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE B	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHE_CLOAB	ALCOHOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	653-680	779-806							
PADHE_ECOLI	ALCOHOL DEHYDROGENASE	ESCHERICHIA COLI	271-298								
PADIY_ECOLI	PUTATIVE REGULATORY PROTEIN ADIY	ESCHERICHIA COLI	45-72								
PADP1_MYCGE	140 KD ADHESIN PRECURSOR	MYCOPLASMA GENITALIUM	90-131	697-724	923-950	990-1017	1169-1199	1387-1414			
PADP1_MYCPN	ADHESIN P1 PRECURSOR	MYCOPLASMA PNEUMONIAE	1537-1584								
PADT_RICPR	ADP,ATP CARRIER PROTEIN	RICKETTSIA PROWAZEKII	276-307								
PAERA_AERHY	AEROLYSIN PRECURSOR	AEROMONAS HYDROPHILA	278-305								
PAGAL_STRMU	ALPHA-GALACTOSIDASE	STREPTOCOCCUS MUTANS	419-483	597-633							
PAGAR_PSEAT	BETA-AGARASE PRECURSOR	PSEUDOMONAS ATLANTICA	26-53								
PAGR_STAAU	ACCESSORY GENE REGULATOR PROTEIN	STAPHYLOCOCCUS AUREUS	129-159	165-192							
PAIL_YEREN	ATTACH INVAS LOCUS PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	19-46								
PAK1H_ECOLI	ASPARTOKINASE I	ESCHERICHIA COLI	3-30	466-493	503-530						
PAK2H_ECOLI	ASPARTOKINASE II	ESCHERICHIA COLI	51-78	608-635							
PAK3_BACSU	ASPARTATE KINASE II ALPHA AND BETA SUBUNITS	BACILLUS SUBTILIS	266-312								
PAKAB_CORGL	ASPARTATE KINASE ALPHA AND BETA SUBUNITS	CORYNEBACTERIUM GLUTAMICUM	5-32								
PALF_ECOLI	FRUCTOSE-BISPHOSPHATE ALDOLASE	ESCHERICHIA COLI	286-316								
PALGB_PSEAE	ALGINATE BIOSYN TRANSL REG PROTEIN ALGB	PSEUDOMONAS AERUGINOSA	160-194								
PALGE_PSEAE	ALGINATE PRODUCTION PROTEIN ALGE PRECURSO	PSEUDOMONAS AERUGINOSA	349-376								
PALGP_PSEAE	TRANSCRIPTIONAL REGULATORY PROTEIN ALGP	PSEUDOMONAS AERUGINOSA	81-115								
PALKB_PSEOL	ALKANE-1 MONOOXYGENASE	PSEUDOMONAS OLEOVORANS	115-142								
PALRT_PSEOL	RUBREDOXIN-NAD(+) REDUCTASE	PSEUDOMONAS OLEOVORANS	138-172	338-365							
PALR3_ECOLI	ALANINE RACEMASE, CATABOLIC PRECURSOR	ESCHERICHIA COLI	9-36								

PCGENE	10711Dec	Protegrity Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PALR_BACST	ALANINE RACEMASE	BACILLUS STEAROTHERMOPHILUS	126-153								
PALS1_BACSU	ALS OPERON REGULATORY PROTEIN	BACILLUS SUBTILIS	119-146								
PALSR_BACSU	AUTOLYSIN PRECURSOR	BACILLUS SP	157-187								
PALYS_BACSP	AUTOLYSIN PRECURSOR	BACILLUS SUBTILIS	147-191								
PALYS_BACSU	AUTOLYSIN PRECURSOR	STAPHYLOCOCCUS AUREUS	244-271								
PALYS_STAAU	AUTOLYSIN	STREPTOCOCCUS PNEUMONIAE	223-264	297-338	446-473						
PAMA_STRPN	AMIA PROTEIN PRECURSOR	PSEUDOMONAS CHLORORAPHIS	72-99								
PAMID_PSECL	AMIDASE	STREPTOCOCCUS PNEUMONIAE	187-214								
PAMIE_STRPN	OLIGOPEPTIDE TRANSPORT PROTEIN AMIE	ESCHERICHIA COLI	111-138	199-226							
PAMPA_ECOLI	AMINOPEPTIDASE M	SERRATIA MARCESCENS	231-258								
PAMPC_SERMA	BETA-LACTAMASE PRECURSOR	RICKETTSIA PROWAZEKII	3-47	72-99							
PAMPL_RICPR	CYTOSOL AMINOPEPTIDASE	ESCHERICHIA COLI	655-682								
PAMPN_ECOLI	AMINOPEPTIDASE N	ESCHERICHIA COLI	110-137								
PAMPP_ECOLI	X-PRO AMINOPEPTIDASE	THERMUS AQUATICUS	281-308								
PAMPT_THEAQ	AMINOPEPTIDASE T	DICTYOGLOMUS THERMOPHILUM	507-534								
PAMY1_DICTH	ALPHA-AMYLASE 1	DICTYOGLOMUS THERMOPHILUM	151-178	507-534							
PAMY2_DICTH	ALPHA-AMYLASE 2	SALMONELLA TYPHIMURIUM	70-104								
PAMY3_SALTY	CYTOPLASMIC ALPHA-AMYLASE	DICTYOGLOMUS THERMOPHILUM	280-307								
PAMY3_DICTH	ALPHA-AMYLASE 3	BACILLUS CIRCULANS	61-88								
PAMYB_BACCI	BETA-AMYLASE PRECURSOR	BACILLUS POLYMYXA	60-87	366-393	1143-1184						
PAMYB_BACPO	BETA-AMYLASE	CLOSTRIDIUM THERMOSULFUROGENES	269-296	378-405	459-486						
PAMYB_CLOTU	BETA-AMYLASE, THERMOPHILIC PRECURSOR	CLOSTRIDIUM SP	103-148	480-510							
PAMYG_CLOSP	GLUCOAMYLASE PRECURSOR	BACILLUS STEAROTHERMOPHILUS	426-453								
PAMYM_BACST	MALTOGENIC ALPHA-AMYLASE PRECURSOR	BACILLUS SP	210-237	475-465	613-642						
PAMYR_BACSB	RAW-STARCH-DIGESTING AMYLASE	AEROMONAS HYDROPHILA	415-453								
PAMY_AERHY	ALPHA-AMYLASE PRECURSOR	ALTEROMONAS HALOPLANKTIS	166-193								
PAMY_ALTHA	ALPHA-AMYLASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	102-136								
PAMY_BACAM	ALPHA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	212-239	437-474							
PAMY_BACCI	ALPHA-AMYLASE PRECURSOR	BACILLUS MEGATERIUM	61-88	441-482							
PAMY_BACME	ALPHA-AMYLASE PRECURSOR	BACILLUS SUBTILIS	165-205	281-308							
PAMY_BACSU	ALPHA-AMYLASE PRECURSOR	BUTYRIVIBRIO FIBRISOLVENS	337-418	546-573	579-606	795-822					
PAMY_BUTFI	ALPHA-AMYLASE PRECURSOR	CLOSTRIDIUM ACETOBUTYLICUM	287-310								
PAMY_CLOAB	PUTATIVE ALPHA-AMYLASE	CLOSTRIDIUM THERMOSULFUROGENES	431-468	612-642							
PAMY_CLOTU	ALPHA-AMYLASE PRECURSOR	STREPTOMYCES LIMOSUS	173-200								
PAMY_STRLM	ALPHA-AMYLASE PRECURSOR	AZOTOBACTER VINELANDII	233-259								
PANFA_AZOVI	NITROGEN FIXATION PROTEIN ANFA	AZOTOBACTER VINELANDII	95-122								
PANFD_AZOVI	NITROGENASE IRON-IRON PROTEIN ALPHA CHAIN	AZOTOBACTER VINELANDII	269-296								
PANFK_AZOVI	NITROGENASE IRON-IRON PROTEIN BETA CHAIN	VIBRIO ANGUILLARUM	93-120	169-203							
PANGR_VIBAN	ANGR PROTEIN	FREMYELLA DIPLOSIPHON	51-78								
PAPCE_FREDI	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	337-64	585-615							
PAPCE_SYN96	PHYCOBILISOME LINKER POLYPEPTIDE	SYNECHOCYSTIS SP	52-79								
PAPCE_SYNY4	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	SALMONELLA TYPHIMURIUM	62-89								
PAPHC_SALTY	ALKYL HYDROPEROXIDE REDUCTASE C22 PROTEIN	ACHROMOBACTER LYTICUS	478-505								
PAPI_ACHLY	PROTEASE I PRECURSOR	ESCHERICHIA COLI	118-148								
PAPPC_ECOLI	PROBABLE CYTOCHROME OXIDASE SUBUNIT I	PSEUDOMONAS AERUGINOSA	416-450								
PAPRD_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APRD	PSEUDOMONAS AERUGINOSA	133-193	208-235	247-277						
PAPRE_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APRE	ESCHERICHIA COLI	121-148								
PAPT_ECOLI	ADENINE PHOSPHORIBOSYLTRANSFERASE	THERMOANAEROBACTER ETHANOLICUS	276-303	347-374	936-982	987-1014	1210-1254	1381-1408			
PAPU_THEET	ALPHA-AMYLASE-PULLULANASE PRECURSOR	MYCOPLASMA ARGININI	60-87	218-245							
PARCA_MYCAR	ARGININE DEIMINASE	ESCHERICHIA COLI	102-150	302-329	399-426						
PARCB_ECOLI	AEROBIC RESPIRATION CONTROL PROTEIN ARCB	PSEUDOMONAS AERUGINOSA	274-301	386-420							
PARCD_PSEAE	PROBABLE ARGININE/ORNITHINE ANTIPORTER	ESCHERICHIA COLI	81-109								
PARGA_ECOLI	AMINO-ACID ACETYLTRANSFERASE	ESCHERICHIA COLI	84-111								
PARGT_ECOLI	LYS-ARG-ORN-BINDING PROTEIN (LAO) PRECURSO	STAPHYLOCOCCUS AUREUS	86-120								
PAROA_STAAU	PHOSPHOSHIKIMATE 1-CARBOXYVINYLTRANSFER	ESCHERICHIA COLI	68-95								
PAROC_ECOLI	CHORISMATE SYNTHASE	SALMONELLA TYPHI	68-95								
PAROC_SALTI	CHORISMATE SYNTHASE	BACILLUS SUBTILIS	49-76								
PAROD_BACSU	DEHYDROQUINATE DEHYDRATASE										

PCGENE	1071.1784	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PAROK_ECOLI	SHIKIMATE KINASE I	ESCHERICHIA COLI	84-118								
PARP4_STRPY	IGA RECEPTOR PRECURSOR	STREPTOCOCCUS PYOGENES	13-46	127-157	266-324						
PARP_ECOLI	ARP PROTEIN	ESCHERICHIA COLI	255-282								
PARA_ECOLI	ARSENICAL PUMP-DRIVING ATPASE	ESCHERICHIA COLI	201-238								
PARB_ECOLI	ARSENICAL PUMP MEMBRANE PROTEIN	ESCHERICHIA COLI	291-318								
PARB_STAAU	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS AUREUS	27-71	295-322							
PARB_STAXY	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS XYLOSUS	27-71	295-322							
PARR_STAAU	ARSENICAL RESIST OPERON REPRESSOR PROTEIN	STAPHYLOCOCCUS AUREUS	56-93								
PARTA_ECOLI	ARTA PROTEIN	ESCHERICHIA COLI	3-30								
PARTI_ECOLI	TRANSPORT SYSTEM PROTEIN ARTI	ESCHERICHIA COLI	105-132	213-240							
PARTP_ECOLI	TRANSPORT SYSTEM PROTEIN ARTP	ESCHERICHIA COLI	176-206								
PASAI_ENTFA	AGGREGATION SUBSTANCE PRECURSOR	ENTEROCOCCUS FAECALIS	195-234	478-505	799-826	859-896					
PASNA_ECOLI	ASPARTATE--AMMONIA LIGASE	ESCHERICHIA COLI	127-158								
PASNB_ECOLI	ASPARAGINE SYNTHETASE II	ESCHERICHIA COLI	440-477								
PASNC_ECOLI	REGULATORY PROTEIN ASNC	ESCHERICHIA COLI	116-141								
PASPA_BACSU	ASPARTATE AMMONIA-LYASE	BACILLUS SUBTILIS	7-34								
PASPA_ECOLI	ASPARTATE AMMONIA-LYASE	ESCHERICHIA COLI	204-236								
PASPA_SERMA	ASPARTATE AMMONIA-LYASE	SERRATIA MARCESCENS	204-231								
PASPG_BACLI	L-ASPARAGINASE	BACILLUS LICHENIFORMIS	232-288								
PASPO_ERWCH	L-ASPARAGINASE PRECURSOR	ERWINIA CHRYSANTHEMI	188-218								
PASPQ_ACIGL	GLUTAMINASE-ASPARAGINASE	ACINETOBACTER GLUTAMINASIFICANS	46-80								
PASSY_ECOLI	ARGININOSUCCINATE SYNTHASE	ESCHERICHIA COLI	334-381								
PASSY_METBA	ARGININOSUCCINATE SYNTHASE	METHANOSARCINA BARKERI	287-314								
PATBP_STAAU	POTENTIAL ATP-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	41-68	201-245							
PATKA_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE A	ENTEROCOCCUS FAECALIS	41-80	347-374							
PATKB_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE B	ENTEROCOCCUS FAECALIS	280-310	450-477							
PATKB_SALTY	MG(2+) TRANSPORT ATPASE, P-TYPE	SALMONELLA TYPHIMURIUM	303-330								
PATP1_SYNP6	ATP SYNTHASE A CHAIN	SYNECHOCOCCUS SP	233-260								
PATP6_VIBAL	ATP SYNTHASE A CHAIN	VIBRIO ALGINOLYTICUS	11-38								
PATPA_ANASP	ATP SYNTHASE ALPHA CHAIN	ANABAENA SP	9-36	96-130							
PATPA_BACME	ATP SYNTHASE ALPHA CHAIN	BACILLUS MEGATERIUM	4-36	433-480							
PATPA_ECOLI	ATP SYNTHASE ALPHA CHAIN	ESCHERICHIA COLI	486-513								
PATPA_ENTFA	ATP SYNTHASE ALPHA CHAIN	ENTEROCOCCUS FAECALIS	4-36	484-518							
PATPA_MYCGA	ATP SYNTHASE ALPHA CHAIN	MYCOPLASMA GALLISEPTICUM	362-409								
PATPA_PROMO	ATP SYNTHASE ALPHA CHAIN	PROPIONIGENIUM MODESTUM	6-36								
PATPA_RHORU	ATP SYNTHASE ALPHA CHAIN	RHODOSPIRILLUM RUBRUM	165-200	439-486							
PATPA_SULAC	ATPASE ALPHA CHAIN	SULFOLOBUS ACIDOCALDARIUS	318-345	567-589							
PATPA_SYNP1	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	7-44								
PATPA_SYNP6	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	8-45	362-389							
PATPA_SYNY3	ATP SYNTHASE ALPHA CHAIN	SYNECHOCYSTIS SP	8-37	434-500							
PATPA_THEP3	ATP SYNTHASE ALPHA CHAIN	THERMOPHILIC BACTERIUM PS-3	9-36								
PATPA_VIBAL	ATP SYNTHASE ALPHA CHAIN	VIBRIO ALGINOLYTICUS	464-513								
PATPB_ANASP	ATP SYNTHASE BETA CHAIN	ANABAENA SP	280-307	370-397							
PATPB_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	163-190	358-385							
PATPB_MYCGA	ATP SYNTHASE BETA CHAIN	MYCOPLASMA GALLISEPTICUM	375-402								
PATPB_RHORU	ATP SYNTHASE BETA CHAIN	RHODOSPIRILLUM RUBRUM	359-386								
PATPB_SULAC	ATPASE BETA CHAIN	SULFOLOBUS ACIDOCALDARIUS	164-191								
PATPB_SYNP1	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	381-408								
PATPB_SYNP6	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	291-318	381-408							
PATPB_SYNY3	ATP SYNTHASE BETA CHAIN	SYNECHOCYSTIS SP	381-408								
PATPD_ANASP	ATP SYNTHASE DELTA CHAIN	ANABAENA SP	109-139	143-170							
PATPD_BACFI	ATP SYNTHASE DELTA CHAIN	BACILLUS FIRMUS	63-90	133-160							
PATPD_BACME	ATP SYNTHASE DELTA CHAIN	BACILLUS MEGATERIUM	132-159								
PATPD_ENTFA	ATP SYNTHASE DELTA CHAIN	ENTEROCOCCUS FAECALIS	14-41								
PATPD_PROMO	ATP SYNTHASE DELTA CHAIN	PROPIONIGENIUM MODESTUM	79-116	118-149							
PATPD_RHORU	ATP SYNTHASE DELTA CHAIN	RHODOPSEUDOMONAS BLASTICA	135-152								
PATPD_RHORU	ATP SYNTHASE DELTA CHAIN	RHODOSPIRILLUM RUBRUM	119-146								

PCGENE ID/ATTR=4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME PROTEIN	ORGANISM								
PATPD_SYNP1 ATP SYNTHASE DELTA CHAIN	SYNECHOCOCCUS SP	100-137							
PATPD_SYNY3 ATP SYNTHASE DELTA CHAIN	SYNECHOCYSTIS SP	113-147							
PATPD_VIBAL ATP SYNTHASE DELTA CHAIN	VIBRIO ALGINOLYTICUS	116-137							
PATPE_BACFI ATP SYNTHASE EPSILON CHAIN	BACILLUS FIRMUS	53-80							
PATPE_MYCGA ATP SYNTHASE EPSILON CHAIN	MYCOPLASMA GALLISEPTICUM	99-126							
PATPE_PROMO ATP SYNTHASE EPSILON CHAIN	PROPIONIGENIUM MODESTUM	100-127							
PATPE_SYNP1 ATP SYNTHASE EPSILON CHAIN	SYNECHOCOCCUS SP1	72-106							
PATPF_ANASP ATP SYNTHASE B CHAIN	ANABAENA SP	17-44	51-78	137-164					
PATPF_BACFI ATP SYNTHASE B CHAIN	BACILLUS FIRMUS	110-151							
PATPF_BACME ATP SYNTHASE B CHAIN	BACILLUS MEGATERIUM	55-83	122-170						
PATPF_MYCGA ATP SYNTHASE B CHAIN	MYCOPLASMA GALLISEPTICUM	82-135	170-197						
PATPF_SYNP1 ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	13-49	111-139						
PATPF_SYNP6 ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	12-39	128-155						
PATPF_THEPJ ATP SYNTHASE B CHAIN PRECURSOR	THERMOPHILIC BACTERIUM PS-3	50-77							
PATPG_ANASP ATP SYNTHASE GAMMA CHAIN	ANABAENA SP	276-310							
PATPG_ECOLI ATP SYNTHASE GAMMA CHAIN	ESCHERICHIA COLI	253-283							
PATPG_MYCGA ATP SYNTHASE GAMMA CHAIN	MYCOPLASMA GALLISEPTICUM	28-62	92-140						
PATPG_RHORU ATP SYNTHASE GAMMA CHAIN	RHODOSPIRILLUM RUBRUM	270-297							
PATPG_SYNP1 ATP SYNTHASE GAMMA CHAIN	SYNECHOCOCCUS SP	280-307							
PATPG_SYNY3 ATP SYNTHASE GAMMA CHAIN	SYNECHOCYSTIS SP	96-126	280-307						
PATPI_MYCGA ATP SYNTHASE PROTEIN I	MYCOPLASMA GALLISEPTICUM	133-167							
PATPX_ANASP ATP SYNTHASE B' CHAIN	ANABAENA SP	129-156							
PATPX_BACFI ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	162-189	236-283						
PATPX_RHORU ATP SYNTHASE B' CHAIN	RHODOSPIRILLUM RUBRUM	40-74							
PATPX_SYNP1 ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	57-110	128-155						
PATPX_SYNP6 ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	70-100							
PATPX_SYNY3 ATP SYNTHASE B' CHAIN	SYNECHOCYSTIS SP	108-135							
PATPZ_BACME ATP SYNTHASE PROTEIN I	BACILLUS MEGATERIUM	14-62							
PATPZ_SYNP1 ATP SYNTHASE PROTEIN I	SYNECHOCOCCUS SP	90-131							
PAYVB_PSESG AVIRULENCE B PROTEIN	PSEUDOMONAS SYRINGAE	184-211	233-260						
PBA11_EUBSP 7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53							
PBA12_EUBSP 7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53							
PBACH_HALHM HALORHODOPSIN	HALOBACTERIUM HALOBIUM	145-179							
PBACH_HALSG HALORHODOPSIN PRECURSOR	HALOBACTERIUM SP	180-214							
PBAES_ECOLI SENSOR PROTEIN BAES	ESCHERICHIA COLI	153-186							
PBAO_STRAG IGA FC RECEPTOR PRECURSOR	STREPTOCOCCUS AGALACTIAE	93-119	138-204	267-306	343-385	487-524	562-589	1014-1041	
PBAHO_VITSP BACTERIAL HEMOGLOBIN	VITREOSCILLA SP	119-146							
PBAIC_EUBSP BILE ACID-INDUCIBLE OPERON PROTEIN C	EUBACTERIUM SP	423-450							
PBARA_ECOLI SENSOR PROTEIN BARA	ESCHERICHIA COLI	334-361	425-455						
PBAS5_ECOLI SENSOR PROTEIN BASS	ESCHERICHIA COLI	122-156							
PBAT_HALHA PUTATIVE BACTERIO-OPSIN ACTIVATOR	HALOBACTERIUM HALOBIUM	408-442							
PBAX_ECOLI BAX PROTEIN	ESCHERICHIA COLI	21-64							
PBCCP_ECOLI BIOTIN CARBOXYL CARRIER PROTEIN	ESCHERICHIA COLI	6-35							
PBCDH_RHOCA METHYLTRANSFERASE	RHODOBACTER CAPSULATUS	1000-1032							
PBCHN_RHOCA PROTOCHLOROPHYLLIDE REDUCTASE 46 KD CHAIN	RHODOBACTER CAPSULATUS	249-276							
PBCN5_CLOPE BACTERIOCIN BCN5	CLOSTRIDIUM PERFRINGENS	73-99	585-646						
PBCPA_PROAE BACTERIOCHLOROPHYLL A PROTEIN	PROSTHECOCHLORIS AESTUARII	63-93							
PBCSC_ACEXY CELLULOSE SYNTHASE OPERON C PROTEIN	ACETOBACTER XYLINUM	131-158	1035-1082						
PBCSD_ACEXY CELLULOSE SYNTHASE OPERON D PROTEIN	ACETOBACTER XYLINUM	10-37							
PBENA_ACICA BENZOATE 1,2-DIOXYGENASE ALPHA SUBUNIT	ACINETOBACTER CALCOACETICUS	190-217							
PBETT_ECOLI HIGH AFFINITY CHOLINE TRANSPORT PROTEIN	ESCHERICHIA COLI	243-270							
PBEXA_HAEIN BEXA PROTEIN	HAEMOPHILUS INFLUENZAE	23-50							
PBEXC_HAEIN BEXC PROTEIN	HAEMOPHILUS INFLUENZAE	157-184	226-253						
PBEXD_HAEIN BEXD PROTEIN	HAEMOPHILUS INFLUENZAE	205-239							
PBFR_NITWI BACTERIOFERRITIN	NITROBACTER WINOGRADSKYI	8-35							
PBGAJ_ECOLI EVOLVED BETA-GALACTOSIDASE ALPHA-SUBUNIT	ESCHERICHIA COLI	935-985							
PBGAL_BACST BETA-GALACTOSIDASE	BACILLUS STEAROTHERMOPHILUS	599-633							

PCGENE	107a170a4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PBGAL_CLOAB	BETA-GALACTOSIDASE	CLOSTRIDIUM ACETOBUTYLICUM	824-851								
PBGAL_CLOTU	BETA-GALACTOSIDASE	CLOSTRIDIUM THERMOSULFUROGENES	161-191								
PBGAL_KLEPN	BETA-GALACTOSIDASE	KLEBSIELLA PNEUMONIAE	243-272								
PBGAL_LACDE	BETA-GALACTOSIDASE	LACTOBACILLUS DELBRUECKII	305-332								
PBGAL_STRTR	BETA-GALACTOSIDASE	STREPTOCOCCUS THERMOPHILUS	188-215								
PBGAL_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	59-86	179-206							
PBGAM_LEULA	BETA-GALACTOSIDASE SMALL SUBUNIT	LEUCONOSTOC LACTIS	129-156								
PBGAM_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	106-140								
PBGLA_CLOTM	BETA-GLUCOSIDASE A	CLOSTRIDIUM THERMOCELLUM	353-380	418-445							
PDGLB_CLOTM	THERMOSTABLE BETA-GLUCOSIDASE B	CLOSTRIDIUM THERMOCELLUM	259-286	375-409	534-581	631-665					
PBGLR_ECOLI	BETA-GLUCURONIDASE	ESCHERICHIA COLI	464-494	536-563							
PBGLS_AGRSP	BETA-GLUCOSIDASE	AGROBACTERIUM SP	421-448								
PBGLS_BUTFI	BETA-GLUCOSIDASE A	BUTYRIVIBRIO FIBRISOLVENS	85-112	435-462	692-719	738-765					
PBINJ_STAAU	POTENTIAL DNA-INVERTASE (INJ)	STAPHYLOCOCCUS AUREUS	60-87								
PUINL_STAAU	TRANSPOSON TN552 RESOLVASE	STAPHYLOCOCCUS AURIUS	163-197								
PBINR_STAAU	DNA-INVERTASE BINR	STAPHYLOCOCCUS AUREUS	163-190								
PBIOA_BACSH	AMINOTRANSFERASE	BACILLUS SPHAERICUS	33-60								
PBIOB_BACSH	BIOTIN SYNTHETASE	BACILLUS SPHAERICUS	145-172								
PBIOB_ECOLI	BIOTIN SYNTHETASE	ESCHERICHIA COLI	130-157								
PBIOD_BACSH	DETHIOBIOTIN SYNTHASE	BACILLUS SPHAERICUS	144-171								
PBLA1_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	91-118	275-305							
PBLA1_HAEIN	BETA-LACTAMASE ROB-1 PRECURSOR	HAEMOPHILUS INFLUENZAE	152-179	204-231							
PBLA2_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	18-67	201-228							
PBLA2_BACSP	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS SP	18-67								
PBLA3_BACCE	BETA-LACTAMASE PRECURSOR, TYPE III	BACILLUS CEREUS	135-83	95-129							
PBLA4_PSEAE	BETA-LACTAMASE PSE-4 PRECURSOR	PSEUDOMONAS AERUGINOSA	19-50								
PBLAB_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	20-66	200-227							
PBLAB_BACFR	BETA-LACTAMASE PRECURSOR, TYPE II	BACTEROIDES FRAGILIS	22-49								
PBLAC_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	93-120	276-303							
PBLAC_BACLI	BETA-LACTAMASE PRECURSOR	BACILLUS LICHENIFORMIS	47-74	86-115							
PBLAC_PROMI	BETA-LACTAMASE PRECURSOR	PROTEUS MIRABILIS	191-221								
PBLAC_PROVU	BETA-LACTAMASE	PROTEUS VULGARIS	4-38	240-267							
PBLAC_STRAL	BETA-LACTAMASE PRECURSOR	STREPTOMYCES ALBUS G	43-70								
PBLAD_KLEPN	BETA-LACTAMASE REPRESSOR	KLEBSIELLA PNEUMONIAE	121-148								
PBLAI_STAAU	PENICILLINASE REPRESSOR	STAPHYLOCOCCUS AUREUS	19-74	99-126							
PBLAO_ECOLI	BETA-LACTAMASE PRECURSOR	ESCHERICHIA COLI	118-166	235-262							
PBLAP_ECOLI	BETA-LACTAMASE PSE-2 PRECURSOR	ESCHERICHIA COLI	135-196								
PBLAR_BACLI	REGULATORY PROTEIN BLAR1	BACILLUS LICHENIFORMIS	129-156	515-552							
PBLAR_STAAU	REGULATORY PROTEIN BLAR1	STAPHYLOCOCCUS AUREUS	87-114	122-161	234-261	281-312	503-539				
PBMP_TREPA	BASIC MEMBRANE PROTEIN PRECURSOR	TREPONEMA PALLIDUM	312-346								
PBMR_BACSU	MULTIDRUG RESISTANCE PROTEIN	BACILLUS SUBTILIS	277-304								
PBNZA_PSEFU	BENZENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PBNZB_PSEFU	BENZENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PBNZD_PSEFU	P4 SUBUNIT	PSEUDOMONAS PUTIDA	179-213								
PBPS2_DESAM	BPS2 PROTEIN	DESULFUROLOBUS AMBIVALENS	157-237	242-290	311-355	391-425	543-573				
PBRAB_PSEAE	CARRIER PROTEIN	PSEUDOMONAS AERUGINOSA	260-287	313-340							
PBRAE_PSEAE	TRANSPORT PROTEIN BRAE	PSEUDOMONAS AERUGINOSA	234-281								
PBRAG_PSEAE	BRAG PROTEIN	PSEUDOMONAS AERUGINOSA	7-34								
PBTUB_ECOLI	VITAMIN B12 RECEPTOR PRECURSOR	ESCHERICHIA COLI	439-466								
PBTUE_ECOLI	VITAMIN B12 TRANSPORT PERIPLASMIC PROTEIN	ESCHERICHIA COLI	6-33								
PBVGA_BORPE	TRANSCRIPTION REGULATOR BVGA	BORDETELLA PERTUSSIS	174-205								
		BORDETELLA BRONCHISEPTICA									
PBVGB_BORPE	PERIPLASMIC PROTEIN BVGB PRECURSOR	BORDETELLA PERTUSSIS	116-143								
PBVGC_BORPE	SENSOR PROTEIN BVGC	BORDETELLA PERTUSSIS	39-66	202-229							
PBVGS_BORBR	VIRULENCE BVGS PROTEIN PRECURSOR	BORDETELLA BRONCHISEPTICA	113-143	341-368	501-531						
PBXA_CLOBO	BOTULINUM NEUROTOXIN TYPE A PRECURSOR	CLOSTRIDIUM BOTULINUM	313-340	686-729	733-762	815-842	851-893	968-995	1139-1207		
PBXB_CLOBO	BOTULINUM NEUROTOXIN TYPE B PRECURSOR	CLOSTRIDIUM BOTULINUM	666-693	720-762	802-832	853-890	1004-1031	1038-1089			

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PBXC1_CLOBO	BOTULINUM NEUROTOXIN TYPE C1 PRECURSOR	CLOSTRIDIUM BOTULINUM	86-113	314-341	730-773	798-825	836-892				
PBXD_CLOBO	BOTULINUM NEUROTOXIN TYPE D PRECURSOR	CLOSTRIDIUM BOTULINUM	473-500	526-576	727-770	804-831	847-892	906-963	1060-1087		
PBXE_CLOBO	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BOTULINUM	234-291	350-381	704-753	771-811	890-917	992-1019	1115-1149		
PBXE_CLOBU	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BUTYRICUM	234-291	350-381	704-753	774-808	890-917	992-1019	1115-1149		
PBXF_CLOBO	BOTULINUM NEUROTOXIN TYPE F PRECURSOR	CLOSTRIDIUM BOTULINUM	669-710	735-772	892-919	1013-1040	1095-1122	1183-1210			
PC150_MICAE	CYTOCHROME C550	MICROCYSTIS AERUGINOSA	3-30								
PCADA_BACFI	PROBABLE CADMIUM-TRANSPORTING ATPASE	BACILLUS FIRMUS	30-57	100-131	165-192	276-306	533-567				
PCADA_STAAU	PROBABLE CADMIUM-TRANSPORTING ATPASE	STAPHYLOCOCCUS AUREUS	282-309	336-370							
PCADC_ECOLI	TRANSCRIPTIONAL ACTIVATOR CADC	ESCHERICHIA COLI	34-85	412-443							
PCAFA_YERPE	F1 CAPSULE ANCHORING PROTEIN PRECURSOR	YERSINIA PESTIS	203-240	416-457	530-557	619-646					
PCAPA_BACAN	CAPA PROTEIN	BACILLUS ANTHRACIS	108-138								
PCAPB_BACAN	CAPB PROTEIN	BACILLUS ANTHRACIS	36-70								
PCAPP_ANANI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANACYSTIS NIDULANS	248-393								
PCAPP_ANASP	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANABAENA SP	98-125	157-184	687-718						
PCAPP_CORGL	PHOSPHOENOLPYRUVATE CARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	15-42								
PCAPP_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ESCHERICHIA COLI	35-62								
PCARA_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	274-319								
PCARB_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	790-831								
PCARB_ECOLI	CARBAMOYL-PHOSPHATE SYNTHASE LARGE CHAI	ESCHERICHIA COLI	454-481								
PCAT3_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCAT5_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCATA_ACICA	CATECHOL 1,3-DIOXYGENASE	ACINETOBACTER CALCOACETICUS	31-65								
PCATA_BACST	PEROXIDASE/CATALASE	BACILLUS STEAROTHERMOPHILUS	440-470								
PCATA_ECOLI	CATALASE HPI	ESCHERICHIA COLI	379-606								
PCATA_MICLU	CATALASE	MICROCOCCUS LUTEUS	453-480								
PCATA_SALTY	CATALASE HPII	SALMONELLA TYPHIMURIUM	515-542	580-607							
PCATE_ECOLI	CATALASE HPII	ESCHERICHIA COLI	173-202								
PCAT_CAMCO	CHLORAMPHENICOL ACETYLTRANSFERASE	CAMPYLOBACTER COLI	84-111								
PCAT_CLOBU	CHLORAMPHENICOL ACETYLTRANSFERASE	CLOSTRIDIUM BUTYRICUM	88-115								
PCAT_ECOLI	CHLORAMPHENICOL ACETYLTRANSFERASE	ESCHERICHIA COLI	92-119								
PCAT_PROMI	CHLORAMPHENICOL ACETYLTRANSFERASE	PROTEUS MIRABILIS	92-119								
PCAT_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS INTERMEDIUS	7-34	87-114							
PCAT_STRAG	CHLORAMPHENICOL ACETYLTRANSFERASE	STREPTOCOCCUS AGALACTIAE	7-34	87-114							
PCBHE_COXBU	CBHE PROTEIN	COXIELLA BURNETII	209-236								
PCBPT_THEVU	CARBOXYPEPTIDASE T PRECURSOR	THERMOACTINOMYCES VULGARIS	48-75								
PCCA_ECOLI	TRNA NUCLEOTIDYLTRANSFERASE	ESCHERICHIA COLI	376-403								
PCCMK_SYNP7	CO1 CONC MECH PROTEIN CCMK	SYNECHOCOCCUS SP	29-56								
PCCMM_SYNP7	CO1 CONC MECH PROTEIN CCMM	SYNECHOCOCCUS SP	212-238	331-372	443-486						
PCDAS_THEET	CYCLOMALTODEXTRINASE	THERMOANAEROBACTER ETHANOLICUS	305-332								
PCDG1_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	439-466	616-643							
PCDG1_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	210-231	438-466	615-642						
PCDGT_BACCI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS CIRCULANS	217-244	442-472	594-631						
PCDGT_BACLI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS LICHENIFORMIS	217-244	442-472	594-647						
PCDGT_BACOH	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS OHBENSIS	410-431								
PCDGT_BACSO	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	615-642						
PCDGT_BACS2	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	409-431								
PCDGT_BACSJ	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	614-641						
PCDGT_BACSP	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-465	615-642						
PCDGT_BACSS	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	217-244	442-472	594-631						
PCDGT_BACST	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS STEAROTHERMOPHILUS	586-646								
PCDGT_KLEPN	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	KLEBSIELLA PNEUMONIAE	212-239								
PCEA1_ECOLI	COLICIN E1 PROTEIN	ESCHERICHIA COLI	44-71	285-326							
PCEA1_SHISO	COLICIN E1' PROTEIN	SHIGELLA SONNEI	44-71	284-325	413-440						
PCEA2_ECOLI	COLICIN E2	ESCHERICHIA COLI	334-368								
PCEA3_ECOLI	COLICIN E3	ESCHERICHIA COLI	334-368								
PCEA6_ECOLI	COLICIN E6	ESCHERICHIA COLI	334-368								
PCEAB_ECOLI	COLICIN B	ESCHERICHIA COLI	283-341								

PCGENE	1007177044	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PCEAD_ECOLI	COLICIN D	ESCHERICHIA COLI	284-311								
PCEAM_ECOLI	COLICIN M	ESCHERICHIA COLI	178-227								
PCEAN_ECOLI	COLICIN N	ESCHERICHIA COLI	119-146	171-200							
PCEA_CITFR	COLICIN A	CITROBACTER FREUNDII	228-258								
PCEFD_STRCL	ISOPENICILLIN N EPIMERASE	STREPTOMYCES CLAVULIGERUS	370-397								
PCEIA_ECOLI	COLICIN IA PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCEIB_ECOLI	COLICIN IB PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCELA_ACEXY	UTP URIDYLYLTRANSFERASE	ACETOBACTER XYLINUM	59-89								
PCELA_ECOLI	PROTEIN CELA	ESCHERICHIA COLI	76-103								
PCFAA_ECOLI	CFAI FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	37-58								
PCFAC_ECOLI	CFAI FIMBRIAL SUBUNIT C PRECURSOR	ESCHERICHIA COLI	138-187	388-436	561-595						
PCFAD_ECOLI	CFAI FIMBRIAL SUBUNIT D	ESCHERICHIA COLI	133-160								
PCFAE_ECOLI	CFAI FIMBRIAL SUBUNIT E	ESCHERICHIA COLI	180-207	244-271							
PCH10_ACYPS	10 KD CHAPERONIN	ACYRTHOSIPHON PISUM SYMBIOTIC BACTERIUM	37-93								
PCH10_BACSU	10 KD CHAPERONIN	BACILLUS SUBTILIS	66-93								
PCH10_CHLTR	10 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	64-91								
PCH10_ECOLI	10 KD CHAPERONIN	ESCHERICHIA COLI	57-84								
PCH10_HAEDU	10 KD CHAPERONIN	HAEMOPHILUS DUCREYI	68-95								
PCH10_LEGMI	10 KD CHAPERONIN	LEGIONELLA MICDADEI	57-84								
PCH10_RICTS	10 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	65-92								
PCH10_THEFU	10 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	66-93								
PCH60_ACYPS	60 KD CHAPERONIN	ACYRTHOSIPHON PISUM SYMBIOTIC BACTERIUM	341-382								
PCH60_AGRTU	60 KD CHAPERONIN	AGROBACTERIUM TUMEFACIENS	117-163	339-370	425-466						
PCH60_AMOPS	60 KD CHAPERONIN	AMOEBA PROTEUS SYMBIOTIC BACTERIUM	299-333								
PCH60_BACSU	60 KD CHAPERONIN	BACILLUS SUBTILIS	298-332	337-364							
PCH60_BORBU	60 KD CHAPERONIN	BORRELIA BURGDORFERI	135-163	299-368							
PCH60_BRUAB	60 KD CHAPERONIN	BRUCELLA ABORTUS	117-144	339-366							
PCH60_CHLPN	60 KD CHAPERONIN	CHLAMYDIA PNEUMONIAE	4-31								
PCH60_CHLTR	60 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	4-31								
PCH60_CHRVI	60 KD CHAPERONIN	CHROMATIUM VINOSUM	300-327								
PCH60_CLOAB	60 KD CHAPERONIN	CLOSTRIDIUM ACETOBUTYLICUM	338-332	337-364	435-482						
PCH60_CLOPE	60 KD CHAPERONIN	CLOSTRIDIUM PERFRINGENS	337-368	417-444							
PCH60_COXBU	60 KD CHAPERONIN	COXIELLA BURNETII	300-327	348-382							
PCH60_HAEDU	60 KD CHAPERONIN	HAEMOPHILUS DUCREYI	339-366	417-444							
PCH60_LEGMI	60 KD CHAPERONIN	LEGIONELLA MICDADEI	299-333								
PCH60_LEGPN	60 KD CHAPERONIN	LEGIONELLA PNEUMOPHILA	298-332	452-479							
PCH60_MYCLE	60 KD CHAPERONIN	MYCOBACTERIUM LEPRAE	123-152	336-263	337-364						
PCH60_MYCTU	60 KD CHAPERONIN	MYCOBACTERIUM TUBERCULOSIS & BOVIS	123-152	337-364							
PCH60_PSEAE	60 KD CHAPERONIN	PSEUDOMONAS AERUGINOSA	339-366								
PCH60_RHILV	60 KD CHAPERONIN	RHIZOBIUM LEGUMINOSARUM	117-163	322-370	423-466						
PCH60_RICTS	60 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	103-130	293-336	360-394						
PCH60_SYNP7	60 KD CHAPERONIN	SYNECHOCOCCUS SP	308-335	337-380							
PCH60_SYNY3	60 KD CHAPERONIN	SYNECHOCYSTIS SP	338-365	455-489							
PCH60_THEFU	60 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	337-364								
PCH63_STRAL	60 KD CHAPERONIN 2	STREPTOMYCES ALBUS G	116-148	337-364							
PCIB_VIBHA	N,N'-DIACETYLCHITOBIASE PRECURSOR	VIBRIO HARVEYI	21-48	372-399							
PCIEA_BACSU	CHEMOTAXIS PROTEIN CHEA	BACILLUS SUBTILIS	373-400	590-617							
PCIEA_ECOLI	CHEMOTAXIS PROTEIN CHEA	ESCHERICHIA COLI	256-286								
PCIEA_SALTY	CHEMOTAXIS PROTEIN CHEA	SALMONELLA TYPHIMURIUM	162-197								
PCIER_BACSU	CHEMOTAXIS PROTEIN METHYLTRANSFERASE	BACILLUS SUBTILIS	124-151								
PCIEW_ECOLI	PURINE-BINDING CHEMOTAXIS PROTEIN	ESCHERICHIA COLI	68-115								
PCIEW_SALTY	PURINE-BINDING CHEMOTAXIS PROTEIN	SALMONELLA TYPHIMURIUM	88-115								
PCIEY_ECOLI	CHEMOTAXIS PROTEIN CHEY	ESCHERICHIA COLI	22-49								
PCIEY_SALTY	CHEMOTAXIS PROTEIN CHEY	SALMONELLA TYPHIMURIUM	22-49								
PCH01_BACCI	CHITINASE A1 PRECURSOR	BACILLUS CIRCULANS	491-518	566-593							
PCHIA_AEATSO	CHITINASE A PRECURSOR	ALTEROMONAS SP	345-372								
PCHIA_SERMA	CHITINASE A PRECURSOR	SERRATIA MARCESCENS	346-373								

PCGENE FILE NAME	10x117bx4 PROTEIN	Prokaryotic Sequences ORGANISM	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4	AREA5	AREA5
PCHID_BACCI	CHITINASE D PRECURSOR	BACILLUS CIRCULANS	102-161	189-216								
PCHT_SACER	CHITINASE	SACCHAROPOLYSPORA ERYTHRAEA	92-119									
PCHT_STRPL	CHITINASE 63 PRECURSOR	STREPTOMYCES PLICATUS	230-284									
PCHMU_BACSU	CHORISMATE MUTASE	BACILLUS SUBTILIS	3-37									
PCHOD_BREST	CHOLESTEROL OXIDASE PRECURSOR	BREVIBACTERIUM STEROLICUM	263-290									
PCHTA_VIBCH	CHOLERA ENTEROTOXIN, A CHAIN PRECURSOR	VIBRIO CHOLERAE	79-106									
PCHVA_AGRTU	BETA-(1-->2)GLUCAN EXPORT PROTEIN	AGROBACTERIUM TUMEFACIENS	4-31	181-208								
PCIVE_AGRTU	RECEPTOR PROTEIN CHVE PRECURSOR	AGROBACTERIUM TUMEFACIENS	100-127									
PCIR1_CITFR	COLICIN I RECEPTOR PRECURSOR	CITROBACTER FREUNDII	435-463									
PCIRA_ECOLI	COLICIN I RECEPTOR PRECURSOR	ESCHERICHIA COLI	146-173									
PCISA_BACSU	PUTATIVE DNA RECOMBINASE	BACILLUS SUBTILIS	378-405									
PCISY_ACIAN	CITRATE SYNTHASE	ACINETOBACTER ANITRATUM	143-170									
PCIST_BACCO	CITRATE SYNTHASE	BACILLUS COAGULANS	24-51									
PCITA_SALTY	CITRATE-PROTON SYMPORT	SALMONELLA TYPHIMURIUM	154-181									
PCITN_KLEPN	CITRATE-SODIUM SYMPORT	KLEBSIELLA PNEUMONIAE	194-221									
PCITN_SALDU	CITRATE-SODIUM SYMPORT	SALMONELLA DUBLIN	194-221									
PCITN_SALPU	CITRATE-SODIUM SYMPORT	SALMONELLA FULLORUM	194-221									
PCLCA_PSEPU	CHLOROCATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS PUTIDA	17-36									
PCLDI_ECOLI	CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	133-167									
PCLD2_ECOLI	CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	178-212	230-277								
PCLD_SALTY	CHAIN LENGTH DETERMINANT PROTEIN	SALMONELLA TYPHIMURIUM	96-127	151-212								
PCLOS_CLOHI	ALPHA-CLOSTRIPAIN PRECURSOR	CLOSTRIDIUM HISTOLYTICUM	30-58	497-524								
PCLPA_ECOLI	ATP-BINDING SUBUNIT CLPA	ESCHERICHIA COLI	655-695									
PCLPA_RHOBL	CLPA HOMOLOG PROTEIN	RHODOPSEUDOMONAS BLASTICA	419-466									
PCLPB_BACNO	CLPB HOMOLOG PROTEIN	BACTEROIDES NODOSUS	116-137	442-476	538-595							
PCLPB_ECOLI	CLPB PROTEIN	ESCHERICHIA COLI	444-489	563-590								
PCLPX_AZOVI	CLPX HOMOLOG PROTEIN	AZOTOBACTER VINELANDII	215-242	332-359								
PCLPX_ECOLI	ATP-BINDING SUBUNIT CLPX	ESCHERICHIA COLI	255-282									
PCN16_ECOLI	2',3'-CYCLIC-NUC 2'-PHOSPHODIESTERASE PRECURS	ESCHERICHIA COLI	50-77									
PCODA_ECOLI	CYTOSINE DEAMINASE	ESCHERICHIA COLI	102-129									
PCOM1_BACSU	A COMPETENCE PROTEIN 1	BACILLUS SUBTILIS	108-135	186-213								
PCOMQ_BACSU	COMPETENCE REGULATORY PROTEIN	BACILLUS SUBTILIS	134-239									
PCOP6_STAAU	COP-6 PROTEIN	STAPHYLOCOCCUS AUREUS	7-53									
PCOPB_PSESM	COPPER RESISTANCE PROTEIN B PRECURSOR	PSEUDOMONAS SYRINGAE	140-167									
PCORA_ECOLI	MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	ESCHERICHIA COLI	134-161									
PCORA_SALTY	MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	SALMONELLA TYPHIMURIUM	134-161									
PCOTE_BACSU	SPORE COAT PROTEIN E	BACILLUS SUBTILIS	42-92									
PCOX1_BRAJA	CYTOCHROME C OXIDASE POLYPEPTIDE I	BRADYRHIZOBIUM JAPONICUM	380-407									
PCOX1_PARDE	CYTOCHROME C OXIDASE POLYPEPTIDE I	PARACOCCUS DENITRIFICANS	383-410									
PCOX1_RHOSH	CYTOCHROME C OXIDASE POLYPEPTIDE I	RHODOBACTER SPHAEROIDES	396-423									
PCOXX_BACFI	OXIDASE ASSEMBLY FACTOR	BACILLUS FIRMUS	36-63									
PCOXX_BACSU	OXIDASE ASSEMBLY FACTOR	BACILLUS SUBTILIS	49-76									
PCPPB_NEIGO	CRYPTIC PLASMID PROTEIN B	NEISSERIA GONORRHOEAE	72-99	163-209								
PCPSB_ECOLI	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	ESCHERICHIA COLI	309-336									
PCPSB_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	311-338									
PCPXA_ECOLI	SENSOR PROTEIN CPXA	ESCHERICHIA COLI	254-281									
PCPXG_STRSQ	CYTOCHROME P450 105C1	STREPTOMYCES SP	157-184									
PCPXJ_SACER	6-DEOXYERYTHRONOLIDE B (DEB) HYDROXYLASE	SACCHAROPOLYSPORA ERYTHRAEA	233-260									
PCPXM_BACSU	CYTOCHROME P450 109	BACILLUS SUBTILIS	240-283									
PCPXN_ANASP	PROBABLE CYTOCHROME P450	ANABAENA SP	98-125									
PCRJ1_BACTI	23 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	151-187									
PCRJ7_BACTM	27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187									
PCR41_BACSH	1.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308									
PCR42_BACSH	1.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308									
PCR43_BACSH	41.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308									
PCR70_BACTD	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	207-234	252-279	429-463							
PCR75_BACTO	75 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	57-84	125-159	427-464							

PCGENE ENTRY NAME	107a17b44 PROTEIN	Prokaryotic Sequences ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCR70_BACTT	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	199-226	244-271	421-455						
PCR71_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-615						
PCR72_BACTI	72 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	74-111	383-414							
PCR73_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-593						
PCR77_BACTI	77 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	308-335	502-529							
PCREC_ECOLI	SENSOR PROTEIN CREC	ESCHERICHIA COLI	103-130								
PCRED_ECOLI	INNER MEMBRANE PROTEIN CRED	ESCHERICHIA COLI	94-121								
PCRP_ECOLI	CATABOLITE GENE ACTIVATOR	ESCHERICHIA COLI & SHIGELLA FLEXNERI	26-53	127-154							
PCRP_SALTY	CATABOLITE GENE ACTIVATOR	SALMONELLA TYPHIMURIUM	26-53	127-154							
PCRTI_ERWHE	PHYTOENE DEHYDROGENASE	ERWINIA HERBICOLA	231-258								
PCRTI_RHOCA	PHYTOENE DEHYDROGENASE	RHODOBACTER CAPSULATUS	389-416								
PCRTJ_RHOCA	CRTJ PROTEIN	RHODOBACTER CAPSULATUS	133-160	334-361	431-458						
PCRY5_BACTA	132 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	721-755	825-892							
PCRY5_BACTB	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	730-771	865-892	1033-1080						
PCRY5_BACTE	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRY5_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	218-252	701-728	775-802						
PCRY5_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1033-1080						
PCRY5_BACTS	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYT_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	730-771	865-892	1033-1080						
PCRYT_BACTE	134 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779	899-926							
PCRYT_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	354-384	701-728	775-802					
PCRYT_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892							
PCRYU_BACTA	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYU_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	700-727	774-801						
PCRYU_BACTK	131 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	738-772	866-893	1034-1081						
PCRYV_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1033-1080						
PCRYV_BACTI	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	110-151	345-372	819-846						
PCRYV_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYW_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	245-279								
PCRYW_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	608-639	662-696	902-919						
PCRYX_BACTK	139 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	92-119	227-254	603-631	783-817	917-964				
PCS32_ECOLI	CS3 PILI SYNTHESIS 60 KD PROTEIN	ESCHERICHIA COLI	42-69	226-253	590-617	344-378					
PCS33_ECOLI	CS3 PILI SYNTHESIS 48 KD PROTEIN	ESCHERICHIA COLI	90-117	134-181	208-242						
PCS34_ECOLI	CS3 PILI SYNTHESIS 33 KD PROTEIN	ESCHERICHIA COLI	20-47	74-108							
PCSG_HALHA	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM HALOBIUM	256-283	584-611							
PCSG_HALVO	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM VOLCANII	143-170	237-231							
PCSG_METFE	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS FERVIDUS	59-107								
PCSG_METSC	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS SOCIABILIS	59-107								
PCSGB_ECOLI	CS1 FIMBRIAL SUBUNIT B PRECURSOR	ESCHERICHIA COLI	23-56								
PCTFA_CLOAB	COA-TRANSFERASE SUBUNIT A	CLOSTRIDIUM ACETOBUTYLICUM	118-145								
PCTFB_CLOAB	COA-TRANSFERASE SUBUNIT B	CLOSTRIDIUM ACETOBUTYLICUM	174-208								
PCTRB_NEIME	INNER-MEMBRANE PROTEIN CTRB	NEISSERIA MENINGITIDIS	153-193								
PCTX_PSEAE	CYTOTOXIN PRECURSOR	PSEUDOMONAS AERUGINOSA	78-115	124-151	160-194	217-251					
PCVAA_ECOLI	COLICIN V SECRETION PROTEIN CVAA	ESCHERICHIA COLI	104-138	163-219							
PCVAB_ECOLI	COLICIN V SECRETION PROTEIN CVAB	ESCHERICHIA COLI	131-178								
PCW7H_BACBR	MIDDLE CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	197-224	411-438	1010-1044						
PCWPC_BACBR	OUTER CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	178-216	560-587	947-988						
PCYAA_BORPE	ADENYLATE CYCLASE PRECURSOR	BORDETELLA PERTUSSIS	48-75	632-659	962-996						
PCYAA_YERUN	ADENYLATE CYCLASE	YERSINIA INTERMEDIA	343-387	591-620							
PCYAB_BORPE	CYAB PROTEIN	BORDETELLA PERTUSSIS	541-568								
PCYAD_BORPE	CYAD PROTEIN	BORDETELLA PERTUSSIS	178-212								
PCYAE_BORPE	CYAE PROTEIN	BORDETELLA PERTUSSIS	313-340								
PCYB_RHOCA	CYTOCHROME B	RHODOBACTER CAPSULATUS	38-65								
PCYDD_ECOLI	TRANSPORT PROTEIN CYDD	ESCHERICHIA COLI	3-30	382-409							
PCYF_NOSSP	APOCYTOCHROME F PRECURSOR	NOSTOC SP	209-243								

PCGENE	10721784	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCMO_ACISP	CYCLOHEXANONE MONOOXYGENASE	ACINETOBACTER SP	439-453								
PCYNT_SYNP7	CARBONIC ANHYDRASE	SYNECHOCOCCUS SP	170-200								
PCYNX_ECOLI	CYNX PROTEIN	ESCHERICHIA COLI	33-80								
PCYOB_ECOLI	CYTOCHROME O UBIQUINOL OXIDASE SUBUNIT I	ESCHERICHIA COLI	11-58								
PCYPH_SYNP7	PEPTIDYL-PROLYL CIS-TRANS ISOMERASE	SYNECHOCOCCUS SP	107-141								
PCYSA_ECOLI	SULFATE PERMEASE A PROTEIN	ESCHERICHIA COLI	164-191								
PCYSB_ECOLI	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	3-30								
PCYSB_SALTY	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	SALMONELLA TYPHIMURIUM	3-30								
PCYSE_ECOLI	SERINE ACETYLTRANSFERASE	ESCHERICHIA COLI	164-191								
PCYSE_SALTY	SERINE ACETYLTRANSFERASE	SALMONELLA TYPHIMURIUM	164-191								
PCYSO_ECOLI	SIROHEM SYNTHASE	ESCHERICHIA COLI	405-432								
PCYSO_SALTY	SIROHEM SYNTHASE	SALMONELLA TYPHIMURIUM	405-432								
PCYSN_ECOLI	SULFATE ADENYLATE TRANSFERASE SUBUNIT 1	ESCHERICHIA COLI	64-91								
PCYSW_ECOLI	SULFATE PERMEASE W PROTEIN	ESCHERICHIA COLI	201-238								
PCYSW_SYNP7	SULFATE PERMEASE W PROTEIN	SYNECHOCOCCUS SP	211-238								
PCZCB_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCB	ALCALIGENES EUTROPHUS	241-268	283-320	364-391						
PCZCD_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCD	ALCALIGENES EUTROPHUS	139-169								
PDACB_BACSU	PENICILLIN-BINDING PROTEIN 3' PRECURSOR	BACILLUS SUBTILIS	80-107								
PDADA_ECOLI	D-AMINO ACID DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PDAOA_ALTHA	NA(+)-LINKED D-ALANINE GLYCINE PERMEASE	ALTEROMONAS HALOPLANKTIS	333-373								
PDAOC_ECOLI	DAMOX PROTEIN	ESCHERICHIA COLI	68-95	349-380							
PDAPA_ECOLI	DEHYDRODIPICOLINATE SYNTHASE	ESCHERICHIA COLI	27-54	157-184							
PDATI_BACSU	DNA-PROTEIN-CYSTEINE METHYLTRANSFERASE	BACILLUS SUBTILIS	13-47								
PDBHA_ECOLI	DNA-BINDING PROTEIN HU-ALPHA	ESCHERICHIA COLI	12-39								
PDBH_CLOPA	DNA-BINDING PROTEIN HU	CLOSTRIDIUM PASTEURIANUM	12-53								
PDCAM_ECOLI	DECARBOXYLASE PROENZYME	ESCHERICHIA COLI	146-173								
PDCDA_CORGL	DIAMINOPIMELATE DECARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	134-161								
PDCDA_PSEAE	DIAMINOPIMELATE DECARBOXYLASE	PSEUDOMONAS AERUGINOSA	57-84								
PDCEB_ECOLI	GLUTAMATE DECARBOXYLASE BETA	ESCHERICHIA COLI	4-31								
PDCHS_ENTAE	HISTIDINE DECARBOXYLASE	ENTEROBACTER AEROGENES	111-138								
PDCHS_KLEPL	HISTIDINE DECARBOXYLASE	KLEBSIELLA PLANTICOLA	111-138								
PDCHS_MORMO	HISTIDINE DECARBOXYLASE	MORGANELA MORGANII	111-138								
PDCID_BACSU	DIPEPTIDE TRANSPORT PROTEIN DCIAD	BACILLUS SUBTILIS	188-222								
PDCLY_HAFAL	LYSINE DECARBOXYLASE	HAFNIA ALVEI	305-332								
PDCOA_KLEPN	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	KLEBSIELLA PNEUMONIAE	261-288	342-369							
PDCOA_SALTY	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	SALMONELLA TYPHIMURIUM	261-288	342-369							
PDCOB_SALTY	OXALOACETATE DECARBOXYLASE BETA CHAIN	SALMONELLA TYPHIMURIUM	299-326								
PDCTB_RHILE	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM LEGUMINOSARUM	377-411								
PDCTB_RHIME	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM MELILOTI	511-538								
PDEAD_ECOLI	ATP-DEPENDENT RNA HELICASE DEAD	ESCHERICHIA COLI	268-295	518-545							
PDEAD_KLEPN	ATP-DEPENDENT RNA HELICASE DEAD	KLEBSIELLA PNEUMONIAE	267-294	519-546							
PDEDA_ECOLI	DEDA PROTEIN	ESCHERICHIA COLI	106-133								
PDEGS_BACSU	SENSOR PROTEIN DEGS	BACILLUS SUBTILIS	31-70	135-159	292-327						
PDEHZ_MORSP	HALOACETATE DEHALOGENASE H-2	MORAXELLA SP	114-141								
PDEOC_ECOLI	DEOXYRIBOSE-PHOSPHATE ALDOLASE	ESCHERICHIA COLI	134-161								
PDHAL_PSEOL	ALDEHYDE DEHYDROGENASE	PSEUDOMONAS OLEOVORANS	6-33								
PDHAS_BACSU	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	BACILLUS SUBTILIS	150-184								
PDHAS_CORGL	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	43-70	312-339							
PDHAS_ECOLI	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	ESCHERICHIA COLI	229-256								
PDHAS_VIBCH	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	VIBRIO CHOLERAE	209-236								
PDHA_BACSH	ALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	149-176								
PDHA_BACST	ALANINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	94-121								
PDHE2_CLODI	NAD-SPECIFIC GLUTAMATE DEHYDROGENASE	CLOSTRIDIUM DIFFICILE	116-143								
PDHE2_PEPAS	D-SPECIFIC GLUTAMATE DEHYDROGENASE	PEPTOSTREPTOCOCCUS ASACCHAROLYTICUS	247-274	345-380							
PDHE2_SULSO	GLUTAMATE DEHYDROGENASE	SULFOLOBUS SOLFATARICUS	2-36								
PDHE4_CORGL	NADP-SPECIFIC GLUTAMATE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	188-215	229-256							
PDHGA_ACICA	GLUCOSE DEHYDROGENASE-A	ACINETOBACTER CALCOACETICUS	10-59	190-217							

PCGENE	10?a17Ba4	Prokaryotic Sequences								
ELEMNAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PDHGB_BACME	GLUCOSE 1-DEHYDROGENASE B	BACILLUS MEGATERIUM	27-57							
PDHG_ECOLI	GLUCOSE DEHYDROGENASE	ESCHERICHIA COLI	436-463							
PDIKT_STRVN	KETOACYL REDUCTASE 1	STREPTOMYCES VIOLACEORUBER	168-195							
PDILE_BACST	LEUCINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	192-219							
PDHLO_AGRT4	D-LYSOPINE DEHYDROGENASE	AGROBACTERIUM TUMEFACIENS	317-344							
PDHMI_METEX	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM EXTORQUENS	133-187	190-224						
PDHMI_METOR	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM ORGANOPHILUM	133-187	190-224						
PDHMI_PARDE	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	PARACOCCUS DENITRIFICANS	195-222							
PDIDA_BACSP	NADH DEHYDROGENASE	BACILLUS SP	284-314							
PDHDA_ECOLI	NADH DEHYDROGENASE	ESCHERICHIA COLI	180-214							
PDHDM_BACSU	HOMOSERINE DEHYDROGENASE	BACILLUS SUBTILIS	73-107	406-433						
PDHDM_CORGL	HOMOSERINE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	103-132							
PDHPH_BACSH	PHENYLALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	212-239							
PDHSA_ECOLI	SUCC DEHYDROGENASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	482-512							
PDISS_ANACY	SOLUBLE HYDROGENASE 42 KD SUBUNIT	ANABAENA CYLINDRICA	86-113	130-168						
PDHSS_SYNP1	SOLUBLE HYDROGENASE, SMALL SUBUNIT	SYNECHOCOCCUS SP	133-160							
PDHTM_METME	TRIMETHYLAMINE DEHYDROGENASE	METHYLOTROPHUS METHYLOPHILUS	439-466							
PDING_ECOLI	PROBABLE ATP-DEPENDENT HELICASE DING	ESCHERICHIA COLI	584-611							
PDIVB_BACSU	DIVISION INITIATION PROTEIN	BACILLUS SUBTILIS	54-82	114-141						
PDLDY_PSEPU	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS PUTIDA	93-120							
PDLDH_AZOVI	LIPOAMIDE DEHYDROGENASE COMP (E3)	AZOTOBACTER VINELANDII	18-45	224-276						
PDLDH_BACST	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS STEAROTHERMOPHILUS	82-124							
PDLDH_BACSU	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS SUBTILIS	82-109							
PDLDH_ECOLI	DIHYDROLIPOAMIDE DEHYDROGENASE	ESCHERICHIA COLI	108-135							
PDLDH_PSEFL	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	124-151	223-275						
PDMPN_PSEPU	PHENOL HYDROXYLASE P3 PROTEIN	PSEUDOMONAS PUTIDA	63-90							
PDNAJ_BACSU	DNAK PROTEIN	BACILLUS SUBTILIS	497-524	548-581						
PDNAJ_BACSU	DNAK PROTEIN	BACILLUS SUBTILIS	456-483							
PDNAA_BACSU	DNAA PROTEIN	BACILLUS SUBTILIS	316-380							
PDNAA_BORBU	DNAA PROTEIN	BORRELIA BURGDORFERI	182-216	248-275	341-387	436-463				
PDNAA_BUCAP	DNAA PROTEIN	BUCHNERA APHIDICOLA	73-100	111-138	353-380					
PDNAA_ECOLI	DNAA PROTEIN	ESCHERICHIA COLI	366-400							
PDNAA_MICLU	DNAA PROTEIN	MICROCOCCUS LUTEUS	383-415							
PDNAA_MYCCA	DNAA PROTEIN	MYCOPLASMA CAPRICOLUM	8-36	75-112	274-310	330-389				
PDNAA_PROMI	DNAA PROTEIN	PROTEUS MIRABILIS	365-399							
PDNAA_PSEPU	DNAA PROTEIN	PSEUDOMONAS PUTIDA	398-439							
PDNAA_SPICI	DNAA PROTEIN	SPIROPLASMA CITRI	45-72	76-110	145-180					
PDNAB_CHLTR	DNAB-LIKE PROTEIN	CHLAMYDIA TRACHOMATIS	312-353							
PDNAB_ECOLI	DNAB PROTEIN	ESCHERICHIA COLI	82-109							
PDNAB_SALTY	DNAB PROTEIN	SALMONELLA TYPHIMURIUM	82-109							
PDNAC_ECOLI	DNAC PROTEIN	ESCHERICHIA COLI	146-190							
PDNAK_BACME	DNAK PROTEIN	BACILLUS MEGATERIUM	497-524	548-581						
PDNAK_BORBU	DNAK PROTEIN	BORRELIA BURGDORFERI	512-594							
PDNAK_BRUOV	DNAK PROTEIN	BRUCELLA OVIS	248-275	512-546						
PDNAK_CAUCR	DNAK PROTEIN	CAULOBACTER CRESCENTUS	561-588							
PDNAK_CLOAB	DNAK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	499-526							
PDNAK_CLOPE	DNAK PROTEIN	CLOSTRIDIUM PERFRINGENS	496-527							
PDNAK_METMA	DNAK PROTEIN	METHANOSARCINA MAZEI	533-560							
PDNAK_MYCTU	DNAK PROTEIN	MYCOBACTERIUM TUBERCULOSIS	502-529							
PDNAK_STRCO	DNAK PROTEIN	STREPTOMYCES COELICOLOR	45-72	533-572						
PDNR_ECOLI	REGULATORY PROTEIN DNR	ESCHERICHIA COLI	114-141							
PDNLI_ZYMMO	DNA LIGASE	ZYMOMONAS MOBILIS	658-712							
PDNRJ_STRPE	TRANSDUCTION PROTEIN DNRJ	STREPTOMYCES PEUCETIUS	24-51							
PDOCK_SULSO	PROBABLE SIGNAL RECOGNITION PARTICLE PROTE	SULFOLOBUS SOLFATARICUS	104-172							
PDPJA_BACSU	DNA POLYMERASE III, ALPHA CHAIN	BACILLUS SUBTILIS	58-85	417-444	1382-1416					
PDPJA_ECOLI	DNA POLYMERASE III, ALPHA CHAIN	ESCHERICHIA COLI	77-104							
PDPJA_SACER	DNA POLYMERASE III, ALPHA CHAIN	SACCHAROPOLYSPORA ERYTHRAEA	230-257							

PCGENE	107:178:4	Prokaryotic Sequences	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM	71-104								
PDPJA_SALTY	DNA POLYMERASE III, ALPHA CHAIN	SALMONELLA TYPHIMURIUM	212-239								
PDPJB_BACSU	DNA POLYMERASE III, BETA CHAIN	BACILLUS SUBTILIS	266-313								
PDPJD_BORBU	DNA POLYMERASE III, BETA CHAIN	BORRELIA BURGDORFERI	31-62	108-359							
PDPJB_BUCAP	DNA POLYMERASE III, BETA CHAIN	BUCHNERA APHIDICOLA	191-218								
PDPJB_MICLU	DNA POLYMERASE III, BETA CHAIN	MICROCOCCUS LUTEUS	36-70								
PDPJB_MYCCA	DNA POLYMERASE III, BETA CHAIN	MYCOPLASMA CAPRICOLUM	30-60								
PDPJB_PSEPU	DNA POLYMERASE III, BETA CHAIN	PSEUDOMONAS PUTIDA	28-112	139-177	233-310						
PDPJB_SPICI	DNA POLYMERASE III, BETA CHAIN	SPIROPLASMA CITRI	231-272								
PDPJX_BACSU	DNA POLYMERASE III SUBUNITS GAMMA AND TAU	BACILLUS SUBTILIS	691-743								
PDPC2_ECOLI	DNA PRIMASE TRAC-2	ESCHERICHIA COLI	401-448								
PDPC4_ECOLI	DNA PRIMASE TRAC-4	ESCHERICHIA COLI	79-120								
PDPND_STRPN	DPND PROTEIN	STREPTOCOCCUS PNEUMONIAE	208-233								
PDPO1_BACCA	DNA POLYMERASE I	BACILLUS CALDOTENAX	198-225	398-425	571-598	645-672					
PDPO1_STRPN	DNA POLYMERASE I	STREPTOCOCCUS PNEUMONIAE	196-223	602-629							
PDPO1_THEAQ	DNA POLYMERASE	THERMUS AQUATICUS	597-628								
PDPO1_THEFL	DNA POLYMERASE	THERMUS AQUATICUS	569-596								
PDPO2_ECOLI	DNA POLYMERASE II	ESCHERICHIA COLI	746-773								
PDPOL_PYRFU	DNA POLYMERASE	PYROCOCCUS FURIOSUS	379-406	416-463	625-659	747-774					
PDPOL_SULSO	DNA POLYMERASE	SULFOLOBUS SOLFATARICUS	333-370	551-589	892-926	1004-1031	1153-1194				
PDPOL_THELI	DNA POLYMERASE	THERMOCOCCUS LITORALIS	716-753								
PDPP_LACLA	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPP_LACLC	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	4-45								
PDPS_ECOLI	DNA PROTECTION DURING STARVATION PROTEIN	ESCHERICHIA COLI	33-60	291-318							
PDRN1_STREQ	DEOXYRIBONUCLEASE PRECURSOR	STREPTOCOCCUS EQUISIMILIS	206-233								
PDRRA_STRPE	DAUNORUBICIN RESISTANCE ATP-BINDING PROTEI	STREPTOMYCES PEUCETIUS	62-89								
PDYRA_STAAU	DIHYDROFOLATE REDUCTASE TYPE I	STAPHYLOCOCCUS AUREUS	134-161	305-339	424-451						
PE13B_BACCI	GLUCAN ENDO-1,3-BETA-GLUCOSIDASE A1 PREC	BACILLUS CIRCULANS	66-100	158-185	325-352	691-725	802-836	871-905			
PEAE_ECOLI	ATTACHING AND EFFACING PROTEIN	ESCHERICHIA COLI	151-178								
PEBGR_ECOLI	EBG OPERON REPRESSOR PROTEIN	ESCHERICHIA COLI	68-98								
PEBR_STAAU	ETHIDIUM BROMIDE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	222-249								
PECHH_RHOCA	ENOYL-COA HYDRATASE HOMOLOG	RHODOBACTER CAPSULATUS	20-47								
PECPD_ECOLI	CHAPERONE PROTEIN ECPD PRECURSOR	ESCHERICHIA COLI	12-39								
PEDD_ZYMMO	PHOSPHOGLUCONATE DEHYDRATASE	ZYMOMONAS MOBILIS	52-79	119-146							
PEDN_STAAU	EPIDERMAL CELL DIF INH PRECURSOR	STAPHYLOCOCCUS AUREUS	427-461								
PEF2_DESMO	ELONGATION FACTOR 2	DESULFUROCOCCUS MOBILIS	186-213								
PEF2_HALHA	ELONGATION FACTOR 2	HALOBACTERIUM HALOBIUM	409-436								
PEF2_METVA	ELONGATION FACTOR 2	METHANOCOCCUS VANNIELII	16-63	145-180							
PEF2_SULAC	ELONGATION FACTOR 2	SULFOLOBUS ACIDOCALDARIUS	13-40	49-76	220-247						
PEF2_THEAC	ELONGATION FACTOR 2	THERMOPLASMA ACIDOPHILUM	332-359								
PEFG_ANANT	ELONGATION FACTOR G	ANACYSTIS NIDULANS	214-241								
PEFG_ECOLI	ELONGATION FACTOR G	ESCHERICHIA COLI	211-239	330-357							
PEFG_MYCLE	ELONGATION FACTOR G	MYCOBACTERIUM LEPRAE	214-241								
PEFG_SALTY	ELONGATION FACTOR G	SALMONELLA TYPHIMURIUM	334-374	481-511							
PEFG_SPIPL	ELONGATION FACTOR G	SPIRULINA PLATENSIS	14-41								
PEFG_SYNY3	ELONGATION FACTOR G	SYNECHOCYSTIS SP	221-258								
PEFT1_STRRA	ELONGATION FACTOR TU1	STREPTOMYCES RANOCISSIMUS	221-258								
PEFT2_STRRA	ELONGATION FACTOR TU2	STREPTOMYCES RANOCISSIMUS	228-255								
PEFT3_STRRA	ELONGATION FACTOR TU3	STREPTOMYCES RANOCISSIMUS	101-135								
PEFTS_ECOLI	ELONGATION FACTOR EF-TS	ESCHERICHIA COLI	27-54	134-161							
PEFTS_SPICI	ELONGATION FACTOR EF-TS	SPIROPLASMA CITRI	18-45	229-256							
PEFTU_BACTR	ELONGATION FACTOR TU	BACTEROIDES FRAGILIS	11-45	230-257							
PEFTU_BACSU	ELONGATION FACTOR TU	BACILLUS SUBTILIS	26-53								
PEFTU_BURCE	ELONGATION FACTOR TU	BURKHOLDERIA CEPACIA	218-245								
PEFTU_CHLTR	ELONGATION FACTOR TU	CHLAMYDIA TRACHOMATIS	230-257								
PEFTU_DEISP	ELONGATION FACTOR TU	DEINONEMA SP	221-248								
PEFTU_FLESI	ELONGATION FACTOR TU	FLEXISTIPES SINUSARABICI	4-31								
PEFTU_HALMA	ELONGATION FACTOR TU	HALOARCULA MARISMORTUI									

PCGENE	10jul18s4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA1	AREA2
PEFTU_MICLU	ELONGATION FACTOR TU	MICROCOCCUS LUTEUS	221-248								
PEFTU_MYCHO	ELONGATION FACTOR TU	MYCOPLASMA HOMINIS	222-249								
PEFTU_MYCLE	ELONGATION FACTOR TU	MYCOBACTERIUM LEPRAE	220-247								
PEFTU_MYCTU	ELONGATION FACTOR TU	MYCOBACTERIUM TUBERCULOSIS	220-247								
PEFTU_SHEPU	ELONGATION FACTOR TU	SHEWANELLA PUTREFACIENS	28-53								
PEFTU_STROR	ELONGATION FACTOR TU	STREPTOCOCCUS ORALIS	233-259								
PELAS_PSEAE	PSEUDOLYSIN PRECURSOR	PSEUDOMONAS AERUGINOSA	141-168								
PELTI_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	78-105								
PELTI_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	79-106								
PELTU_CLOPE	T-LABILE ENTEROTOXIN B CHAIN PRECURSOR	CLOSTRIDIUM PERFRINGENS	226-269								
PENTO_ECOLI	ENTEROBACTIN SYNTHETASE COMPONENT D	ESCHERICHIA COLI	154-188								
PENVM_SALTY	ENVM PROTEIN	SALMONELLA TYPHIMURIUM	34-61								
PEPIB_STAEP	117 KD MEMBRANE ASSOCIATED PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	51-80	125-239	290-325	387-421	857-889				
PEPIC_STAEP	EPIDERMIN BIOSYNTHESIS PROTEIN EPIC	STAPHYLOCOCCUS EPIDERMIDIS	411-447								
PEPIP_STAEP	SERINE PROTEASE EPIP PRECURSOR	STAPHYLOCOCCUS EPIDERMIDIS	7-38	297-334	1117-1144						
PEPIY_STAEP	HYPOTHETICAL 16.7 KD PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	70-101								
PEPIZ_STAEP	HYPOTHETICAL PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	42-100								
PERA_ECOLI	GTP-BINDING ERA PROTEIN	ESCHERICHIA COLI	18-45								
PERB3_SACER	SENSORY TRANSDUCTION PROTEIN ERYC1	SACCHAROPOLYSPORA ERYTHRAEA	209-243								
PEREA_ECOLI	ERYTHROMYCIN ESTERASE TYPE I	ESCHERICHIA COLI	117-64	143-170							
PERY3_SACER	ERYTHRONOLIDE SYNTHASE, MODULES 5 AND 6	SACCHAROPOLYSPORA ERYTHRAEA	9-36	963-994	1117-1144						
PESTA_STRSC	ESTERASE PRECURSOR	STREPTOMYCES SCABIES	128-155								
PESTE_PSEFL	AMYLESTERASE	PSEUDOMONAS FLUORESCENS	163-189								
PETC1_STAAU	ENTEROTOXIN TYPE C-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	155-206							
PETC3_STAAU	ENTEROTOXIN TYPE C-3 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	155-206							
PETC_STAAU	ENTEROTOXIN TYPE C-3 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	155-206							
PETXA_STAAU	ENTEROTOXIN TYPE A PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	165-192							
PETXB_CLOPE	EPSILON-TOXIN, TYPE B PRECURSOR	CLOSTRIDIUM PERFRINGENS	209-236								
PETXB_STAAU	ENTEROTOXIN TYPE B PRECURSOR	STAPHYLOCOCCUS AUREUS	64-101	173-207							
PETXD_STAAU	ENTEROTOXIN TYPE D PRECURSOR	STAPHYLOCOCCUS AUREUS	155-200								
PETXE_STAAU	ENTEROTOXIN TYPE E PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	88-115							
PEUTC_SALTY	ETHANOLAMINE AMMONIA-LYASE LIGHT CHAIN	SALMONELLA TYPHIMURIUM	116-150								
PEVGA_ECOLI	PUTATIVE TRANSCRIPTION REG EVGA	ESCHERICHIA COLI	62-89								
PEVGS_ECOLI	PUTATIVE SENSOR PROTEIN EVGS	ESCHERICHIA COLI	43-79	249-276	431-458	526-553	829-856				
PEXOB_ECOLI	EXODEOXYRIBONUCLEASE V	ESCHERICHIA COLI	226-253								
PEXOB_ECOLI	BIOPOLYMER TRANSPORT EXBB PROTEIN	ESCHERICHIA COLI	80-107								
PEXOA_RHIME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOA	RHIZOBIUM MELILOTI	180-207								
PEXOA_STRFN	EXODEOXYRIBONUCLEASE	STREPTOCOCCUS PNEUMONIAE	218-254								
PEXOF_RHIME	EXOF PROTEIN	RHIZOBIUM MELILOTI	336-370	327-361							
PEXOH_RHIME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOH	RHIZOBIUM MELILOTI	252-279								
PEXOP_RHIME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOP	RHIZOBIUM MELILOTI	211-242	272-299	350-391						
PFADB_ECOLI	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	ESCHERICHIA COLI	36-63	177-204							
PFADL_ECOLI	FATTY ACID TRANSPORT PROTEIN PRECURSOR	ESCHERICHIA COLI	220-247								
PFAED_ECOLI	OUTER MEMBRANE PROTEIN FAED PRECURSOR	ESCHERICHIA COLI	223-257	421-453	507-541						
PFAEF_ECOLI	K88 MINOR FIMBRIAL SUBUNIT PRECURSOR	ESCHERICHIA COLI	18-48								
PFAND_ECOLI	FAND PROTEIN PRECURSOR	ESCHERICHIA COLI	160-194	386-423	596-623	730-757					
PFANE_ECOLI	CHAPERONE PROTEIN FANE PRECURSOR	ESCHERICHIA COLI	22-58								
PFANG_ECOLI	FANG PROTEIN PRECURSOR	ESCHERICHIA COLI	104-131								
PFANH_ECOLI	FANH PROTEIN PRECURSOR	ESCHERICHIA COLI	83-141								
PFAOB_PSEFR	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	PSEUDOMONAS FRAGI	8-42	295-322							
PFDHD_WOLSU	FDHD PROTEIN	WOLINELLA SUCCINOGENES	64-98								
PFDHF_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	613-640								
PFDH_PSESA	FORMATE DEHYDROGENASE	PSEUDOMONAS SP	49-76	366-391							
PFDHG_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	288-315	323-350	696-730						
PFECA_ECOLI	TRANSPORT PROTEIN FECA PRECURSOR	ESCHERICHIA COLI	531-561								
PFECC_ECOLI	TRANSPORT PROTEIN I, CYTOSOLIC	ESCHERICHIA COLI	210-237								
PFECI_ECOLI	FECI PROTEIN	ESCHERICHIA COLI	131-158								

PEGENE	1071173b4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1_	AREA1	AREA1_	AREA2	AREA2_	AREA2	AREA2_
PFEMD_STAAU	POSSIBLE PROTEIN FEMD	STAPHYLOCOCCUS AUREUS	22-56							
PFENR_SYNP2	FERREDOXIN--NADP REDUCTASE	SYNECHOCOCCUS SP	4-31							
PFEPC_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPC	ESCHERICHIA COLI	176-203							
PFEPE_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPE	ESCHERICHIA COLI	182-234	281-308						
PFEPG_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPG	ESCHERICHIA COLI	128-155							
PFERH_ANASP	FERREDOXIN, HETEROCYST	ANABAENA SP	2-29							
PFERX_ANASP	FERREDOXIN-LIKE PROTEIN IN NIF REGION	ANABAENA SP	67-94							
PFHAB_BORPE	FILAMENTOUS HEMAGGLUTININ	BORDETELLA PERTUSSIS	1128-1158	1359-1386	2063-2114	2841-2868	3031-3085	3167-3194		
PFHAC_BORPE	HAEMOLYSIN-LIKE PROTEIN FHAC PRECURSOR	BORDETELLA PERTUSSIS	342-369							
PFILA_ECOLI	FORMATE HYDROGENLYASE TRANSACTIVATOR	ESCHERICHIA COLI	36-63	350-384	401-428					
PFHUA_ECOLI	FERRICHROME-IRON RECEPTOR PRECURSOR	ESCHERICHIA COLI	458-485							
PFHUB_ECOLI	PROTEIN FHUB PRECURSOR	ESCHERICHIA COLI	227-254							
PFHUE_ECOLI	OUTER-MEMBRANE RECEPTOR	ESCHERICHIA COLI	587-614							
PFIB_SPICI	FIBRIL PROTEIN	SPIROPLASMA CITRI	161-195	326-367						
PFIC_ECOLI	CELL FILAMENTATION PROTEIN FIC	ESCHERICHIA COLI	151-178							
PFIC_SALTY	CELL FILAMENTATION PROTEIN FIC	SALMONELLA TYPHIMURIUM	151-178							
PFIMC_BORPE	OUTER MEMBRANE PROTEIN FIMC PRECURSOR	BORDETELLA PERTUSSIS	208-235	540-567	618-645					
PFIMC_ECOLI	CHAPERONE PROTEIN FIMC PRECURSOR	ESCHERICHIA COLI	51-78							
PFIMD_ECOLI	FIMD PROTEIN PRECURSOR	ESCHERICHIA COLI	222-253	458-485	534-561	563-590				
PFIME_ECOLI	TYPE 1 FIMBRIAE REGULATORY PROTEIN FIME	ESCHERICHIA COLI	165-192							
PFINY_SALTY	FIMBRIAE Y PROTEIN	SALMONELLA TYPHIMURIUM	49-76							
PFIMZ_ECOLI	FIMBRIAE Z PROTEIN	ESCHERICHIA COLI	42-69	162-192	196-230					
PFIMZ_SALTY	FIMBRIAE Z PROTEIN	SALMONELLA TYPHIMURIUM	175-209							
PFINQ_ECOLI	FINQ PROTEIN	ESCHERICHIA COLI	145-172							
PFIRA_RICSI	FIRA PROTEIN	RICKETTSIA RICKETTSII	162-189							
PFIXC_AZOCA	FIXC PROTEIN	AZORHIZOBIUM CAULINODANS	129-156							
PFIXL_AZOCA	SENSOR PROTEIN FIXL	AZORHIZOBIUM CAULINODANS	243-234							
PFIXL_BRAJA	SENSOR PROTEIN FIXL	BRADYRHIZOBIUM JAPONICUM	27-54	253-280						
PFLA1_BORBU	FLAGELLAR FILAMENT 41 KD CORE PROTEIN	BORRELIA BURGDORFERI	8-35	271-298						
PFLA1_HALHA	FLAGELLIN A1 PRECURSOR	HALOBACTERIUM HALOBIUM	63-92	157-184						
PFLA1_METVO	FLAGELLIN B1 PRECURSOR	METHANOCOCCUS VOLTAE	28-73	133-160						
PFLA3_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	28-66							
PFLA3_HALHA	FLAGELLIN B1 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63							
PFLA4_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	35-26							
PFLA4_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-90	157-184						
PFLA5_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63	154-181						
PFLA6_BACSU	FLAA LOCUS 32.9 KD PROTEIN	BACILLUS SUBTILIS	33-149	153-186						
PFLAA_CAMCO	FLAGELLIN A	CAMPYLOBACTER COLI	15-42	144-191	497-535					
PFLAA_CAMJE	FLAGELLIN A	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538					
PFLAA_METVO	FLAGELLIN A PRECURSOR	METHANOCOCCUS VOLTAE	28-62							
PFLAA_PSEAE	FLAGELLIN	PSEUDOMONAS AERUGINOSA	3-41	51-88	97-124					
PFLAA_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	181-219	228-265	360-391					
PFLAA_SPIAU	FLAGELLAR FILAMENT PROTEIN PRECURSOR	SPIROCHAETA AURANTIA	162-189							
PFLAA_TREHY	FLAGELLAR FILAMENT PROTEIN PRECURSOR	TREPONEMA HYODYSENTERIAE	55-89	219-285						
PFLAA_TREPA	FLAGELLAR FILAMENT OUTER LAYER PROTEIN	TREPONEMA PALLIDUM	243-270							
PFLAB_CAMCO	FLAGELLIN B	CAMPYLOBACTER COLI	144-191	497-535						
PFLAB_CAMJE	FLAGELLIN B	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538					
PFLAB_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	86-113	177-219	228-255	360-391				
PFLAV_CLOMP	FLAVODOXIN	CLOSTRIDIUM MP	18-52							
PFLAY_CAUCR	REGULATORY PROTEIN FLAY	CAULOBACTER CRESCENTUS	291-318	551-578						
PFLA_BACSU	FLAGELLIN	BACILLUS SUBTILIS	102-129	228-255						
PFLG0_BACSU	FLAGELLAR BASAL-BODY ROD PROTEIN FLGG	BACILLUS SUBTILIS	62-89							
PFLGK_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 1	SALMONELLA TYPHIMURIUM	12-50	333-360	436-540					
PFLGL_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	ESCHERICHIA COLI	61-103	229-266						
PFLGL_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	SALMONELLA TYPHIMURIUM	61-103	229-266						
PFLID_ECOLI	FLAGELLAR TRANSCRIPTIONAL ACTIVATOR FLHD	ESCHERICHIA COLI	6-33							
PFLIA_PSEAE	FLAGELLAR OPERON RNA POL SIGMA FACTOR	PSEUDOMONAS AERUGINOSA	198-232							

PCGENE	107x178x4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PFLIC_ECOLI	FLAGELLIN	ESCHERICHIA COLI	5-41	186-213	295-329	431-466					
PFLIC_SALCH	FLAGELLIN	SALMONELLA CHOLERAE-SUIS	5-41	54-125	136-198						
PFLIC_SALMU	FLAGELLIN	SALMONELLA MUENCHEN	5-41	54-88	136-177	212-259	272-299	376-403			
PFLIC_SALPA	FLAGELLIN	SALMONELLA PARATYPHI-A	5-41	54-125	136-184						
PFLIC_SALRU	FLAGELLIN	SALMONELLA RUBISLAW	5-41	54-125	136-196						
PFLIC_SALTY	FLAGELLIN	SALMONELLA TYPHIMURIUM	5-41	54-125	136-200						
PFLIC_SERMA	FLAGELLIN	SERRATIA MARCESCENS		15-42	53-89	103-130	137-164	273-321			
PFLID_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	ESCHERICHIA COLI	32-66	106-133	160-187	216-298	386-445				
PFLID_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	SALMONELLA TYPHIMURIUM	32-66	106-133	235-299	407-438					
PFLIE_BACSU	FLAG HOOK-BASAL BODY PROTEIN FLIE	BACILLUS SUBTILIS	8-35								
PFLIF_BACSU	FLAGELLAR M-RING PROTEIN	BACILLUS SUBTILIS	327-361	391-418							
PFLIF_CAUCR	FLAGELLAR M-RING PROTEIN	CAULOBACTER CRESCENTUS	24-51	297-324	361-388						
PFLIF_SALTY	FLAGELLAR M-RING PROTEIN	SALMONELLA TYPHIMURIUM	484-529								
PFLIG_BACSU	FLAGELLAR SWITCH PROTEIN FLIG	BACILLUS SUBTILIS	35-62								
PFLIG_ECOLI	FLAGELLAR SWITCH PROTEIN FLIG	ESCHERICHIA COLI	44-71								
PFLIH_BACSU	PROBABLE FLIH PROTEIN	BACILLUS SUBTILIS	19-46	105-133							
PFLIJ_BACSU	FLAGELLAR FLIJ PROTEIN	BACILLUS SUBTILIS	7-37								
PFLIJ_SALTY	FLAGELLAR FLIJ PROTEIN	SALMONELLA TYPHIMURIUM	75-118								
PFLIK_BACSU	PROBABLE FLIK PROTEIN	BACILLUS SUBTILIS	77-104	117-144							
PFLIL_BACSU	FLIL PROTEIN	BACILLUS SUBTILIS	30-71	78-105	109-136						
PFLIL_ECOLI	FLIL PROTEIN	ESCHERICHIA COLI	105-132								
PFLIL_SALTY	FLIL PROTEIN	SALMONELLA TYPHIMURIUM	103-133								
PFLIM_BACSU	FLIM PROTEIN	BACILLUS SUBTILIS	148-175								
PFLIM_ECOLI	FLIM PROTEIN	ESCHERICHIA COLI	231-278								
PFLIN_CAUCR	FLAGELLAR MOTOR SWITCH PROTEIN	CAULOBACTER CRESCENTUS	56-83								
PFLIS_ECOLI	FLAGELLAR PROTEIN FLIS	ESCHERICHIA COLI	59-86								
PFLIT_SALTY	FLAGELLAR PROTEIN FLIT	SALMONELLA TYPHIMURIUM	9-46	67-106							
PFMI2_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFMIA_ECOLI	TYPE-1 FIMBRIAL PROTEIN, A CHAIN PRECURSOR	ESCHERICHIA COLI	5-32								
PFMIC_ECOLI	TYPE-1 FIMBRIAL PROTEIN, C CHAIN PRECURSOR	ESCHERICHIA COLI	11-38								
PFMI_ACTVI	FIMBRIAL SUBUNIT TYPE 1 PRECURSOR	ACTINOMYCES VISCOSUS	248-282	352-379	417-444						
PFM99_ECOLI	FIMBRIAL PROTEIN 9979 PRECURSOR	ESCHERICHIA COLI	114-141								
PFMA0_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMA1_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA3_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA7_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMAA_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	123-150								
PFMAF_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-141								
PFMAH_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	93-122								
PFMAI_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	111-145								
PFMAJ_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	96-123								
PFMCD_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PFMDD_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMDH_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMF3_ECOLI	F17 FIMBRIAL PROTEIN PRECURSOR	ESCHERICHIA COLI	97-124								
PFMM1_NEIME	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA MENINGITIDIS	70-97								
PFMM2_NEIGO	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA GONORRHOEAE	66-97								
PFMM_MORNO	FIMBRIAL PROTEIN PRECURSOR	MORAXELLA NONLIQUEFACIENS	108-146								
PFMP1_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFMP3_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PFMS1_ECOLI	CS1 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	60-87	112-139							
PFMS3_ECOLI	CS3 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	49-98								
PFM_HAEIN	MAJOR FIMBRIAL SUBUNIT PRECURSOR	HAEMOPHILUS INFLUENZAE	102-129								
PFNBA_STAAU	FIBRONECTIN-BINDING PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	41-83	188-215	311-365	431-458	517-555	632-686	722-756		
PFOLC_ECOLI	FOLYLPOLYGLUTAMATE SYNTHASE	ESCHERICHIA COLI	125-159								
PFOLC_LACCA	FOLYLPOLYGLUTAMATE SYNTHASE	LACTOBACILLUS CASEI	129-156								
PFPG_BACFI	FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE	BACILLUS FIRMUS	153-180								

PCGENE	107:178:4	Prokaryotic Sequences		AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE_NAME	PROTEIN	ORGANISM										
PFRDA_ECOLI	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI		395-412								
PFRDA_WOLSU	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	WOLINELLA SUCCINOGENES		8-33	487-514							
PFRZE_MYXXA	GLIDING MOTILITY REGULATORY PROTEIN	MYXOCOCCUS XANTHUS		15-42	478-505							
PFTHS_CLOTH	FORMATE--TETRAHYDROFOLATE LIGASE	CLOSTRIDIUM THERMOACETUM		163-190								
PFTR_METTH	FORMYLTRANSFERASE	METHANOBACTERIUM THERMOAUTOTROPHICU		0-43								
PFTSA_BACSU	CELL DIVISION PROTEIN FTSA	BACILLUS SUBTILIS		76-110								
PFTSA_ECOLI	CELL DIVISION PROTEIN FTSA	ESCHERICHIA COLI		301-338	375-418							
PFTSJ_ECOLI	CELL DIVISION PROTEIN FTSJ	ESCHERICHIA COLI		4-31								
PFTSL_ECOLI	CELL DIVISION PROTEIN FTSL	ESCHERICHIA COLI		63-90								
PFTSN_ECOLI	CELL DIVISION PROTEIN FTSN	ESCHERICHIA COLI		151-188								
PFTSX_ECOLI	CELL DIVISION PROTEIN FTSX	ESCHERICHIA COLI		278-305								
PFTSY_ECOLI	CELL DIVISION PROTEIN FTSY	ESCHERICHIA COLI		230-260								
PFUCR_ECOLI	L-FUCOSE OPERON ACTIVATOR	ESCHERICHIA COLI		7-45								
PFUMA_BACST	FUMARATE HYDRATASE CLASS I, AEROBIC	BACILLUS STEAROTHERMOPHILUS		290-317								
PFUMH_BACSU	FUMARATE HYDRATASE	BACILLUS SUBTILIS		414-445								
PFUR_YERPE	FERRIC UPTAKE REGULATION PROTEIN	YERSINIA PESTIS		99-130								
PGIP1_ECOLI	GLYC 3-PHOS DEHYDROGENASE A	ESCHERICHIA COLI		302-339								
PGIP2_ANAVA	GLYC 3-PHOS DEHYDROGENASE 2	ANABAENA VARIABILIS		87-114								
PGIP3_ANAVA	GLYC 3-PHOS DEHYDROGENASE 3	ANABAENA VARIABILIS		162-189								
PGIP3_ECOLI	GLYC 3-PHOS DEHYDROGENASE C	ESCHERICHIA COLI		216-324								
PGIP_BACME	GLYC 3-PHOS DEHYDROGENASE	BACILLUS MEGATERIUM		49-76	237-271							
PGIP_BACSU	GLYC 3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS		49-76								
PGIP_PYRWO	GLYC 3-PHOS DEHYDROGENASE	PYROCOCCUS WOESEI		259-286								
PGIP_THEMA	GLYC 3-PHOS DEHYDROGENASE	THERMOTOGA MARITIMA		290-328								
PGI6PB_BACST	GLUCOSE-6-PHOSPHATE ISOMERASE B	BACILLUS STEAROTHERMOPHILUS		103-143	241-268							
PG6PD_ECOLI	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ESCHERICHIA COLI		301-338								
PG6PD_ZYMMO	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ZYMOMONAS MOBILIS		165-192								
PGACA_PSEFL	CYANIDE CONTROL PROTEIN	PSEUDOMONAS FLUORESCENS		178-205								
PGALI_SALTY	GALACTOKINASE	SALMONELLA TYPHIMURIUM		86-113								
PGAL7_HAEIN	GAL-1-PHOS URIDYLYLTRANSFERASE	HAEMOPHILUS INFLUENZAE		124-158	239-269							
PGAL7_LACHE	GAL-1-PHOS URIDYLYLTRANSFERASE	LACTOBACILLUS HELVETICUS		304-338								
PGALF_SALTY	GALACTOSE OPERON REPRESSOR	SALMONELLA TYPHIMURIUM		53-91								
PGALR_HAEIN	GALACTOSE OPERON REPRESSOR	HAEMOPHILUS INFLUENZAE		182-209								
PGAL_PSEFL	DE D-GALACTOSE 1-DEHYDROGENASE	PSEUDOMONAS FLUORESCENS		251-278								
PGCH2_ECOLI	GTP CYCLOHYDROLASE II	ESCHERICHIA COLI		78-105								
PGCH2_PHOLE	GTP CYCLOHYDROLASE II	PHOTOBACTERIUM LEIOGNATHI		197-227	246-273							
PGCSH_ECOLI	GLYCINE CLEAVAGE SYSTEM H PROTEIN	ESCHERICHIA COLI		10-37								
PGCSP_ECOLI	GLYCINE DEHYDROGENASE	ESCHERICHIA COLI		216-246								
PGCVA_ECOLI	GLYCINE CLEAVAGE SYSTEM TRANSACTIVATOR	ESCHERICHIA COLI		60-94								
PGENK_ECOLI	PROTEIN K	ESCHERICHIA COLI		24-51								
PGER1_BACSU	SPORE GERMINATION PROTEIN 1	BACILLUS SUBTILIS		49-83	182-216	350-384						
PGERU_BACSU	SPORE GERMINATION PROTEIN III PRECURSOR	BACILLUS SUBTILIS		293-323								
PGERE_BACSU	GERMINATION PROTEIN GERE	BACILLUS SUBTILIS		13-40								
PGGI2_STAHA	ANTIBACTERIAL PROTEIN 2	STAPHYLOCOCCUS HAEMOLYTICUS		6-33								
PGGI3_STAHA	ANTIBACTERIAL PROTEIN 3	STAPHYLOCOCCUS HAEMOLYTICUS		6-33								
PGIDA_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN A	BACILLUS SUBTILIS		396-423								
PGIDA_ECOLI	GLUCOSE INHIBITED DIVISION PROTEIN A	ESCHERICHIA COLI		533-568								
PGIDA_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN A	PSEUDOMONAS PUTIDA		539-566								
PGIDB_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN B	BACILLUS SUBTILIS		34-61								
PGIDB_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN B	PSEUDOMONAS PUTIDA		25-52								
PGLCP_SYNY3	GLUCOSE TRANSPORT PROTEIN	SYNECHOCYSTIS SP		288-322								
PGLDA_BACST	GLYCEROL DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS		20-79								
PGLGA_ECOLI	GLYCOGEN SYNTHASE	ESCHERICHIA COLI		256-283								
PGLGC_ECOLI	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	ESCHERICHIA COLI		114-141								
PGLGC_SALTY	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM		114-141								
PGLMS_ECOLI	GLUC-FRUC-6-PHOSAMINOTRANSFERASE	ESCHERICHIA COLI		209-243								
PGLNI_METTL	GLNB-LIKE PROTEIN 1	METHANOCOCCUS THERMOLITHOTROPHICUS		58-85								

PGENE	107x178x4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
ELENAME	PROTEIN	ORGANISM									
PGLNA_ANASP	GLUTAMINE SYNTHETASE	ANABAENA SP	8-42								
PGLNA_BACSU	GLUTAMINE SYNTHETASE	BACILLUS SUBTILIS	4-31								
PGLNA_CLOAB	GLUTAMINE SYNTHETASE	CLOSTRIDIUM ACETOBUTYLICUM	413-440								
PGLNA_ECOLI	GLUTAMINE SYNTHETASE	ESCHERICHIA COLI	144-171								
PGLNA_METVO	GLUTAMINE SYNTHETASE	METHANOCOCCUS VOLTAE	203-230								
PGLNA_PROVU	GLUTAMINE SYNTHETASE	PROTEUS VULGARIS	142-169								
PGLNA_PYRFU	GLUTAMINE SYNTHETASE	PYROCOCCUS FURIOSUS	391-421								
PGLNA_SALTY	GLUTAMINE SYNTHETASE	SALMONELLA TYPHIMURIUM	144-171								
PGLNA_STRCO	GLUTAMINE SYNTHETASE	STREPTOMYCES COELICOLOR	186-211								
PGLNU_AZOBR	NITROGEN REGULATORY PROTEIN P-II	AZOSPIRILLUM BRASILENSE	15-49								
PGLNB_RHOCA	NITROGEN REGULATORY PROTEIN P-II	RHODOBACTER CAPSULATUS	15-49								
PGLNB_SYNP6	NITROGEN REGULATORY PROTEIN P-II	SYNECHOCOCCUS SP	52-79								
PGLND_ECOLI	UDP URIDYLYLTRANSFERASE	ESCHERICHIA COLI	120-147	151-178							
PGLND_SALTY	UDP URIDYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	151-178								
PGLNE_ECOLI	ADENYLYLTRANSFERASE	ESCHERICHIA COLI	101-130	433-460	761-790						
PGLNH_ECOLI	GLUTAMINE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	126-153								
PGLNQ_BACST	GLUTAMINE PERMEASE OPERON PROTEIN GLNQ	BACILLUS STEAROTHERMOPHILUS	7-34								
PGLPD_BACSU	AEROBIC GLYC-3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	194-230								
PGLPD_ECOLI	AEROBIC GLYC-3-PHOS DEHYDROGENASE	ESCHERICHIA COLI	410-437								
PGLPF_BACSU	GLYCEROL UPTAKE FACILITATOR PROTEIN	BACILLUS SUBTILIS	335-374								
PGLPK_BACSU	GLYCEROL KINASE	BACILLUS SUBTILIS	44-93								
PGLPK_ECOLI	GLYCEROL KINASE	ESCHERICHIA COLI	36-90								
PGLPR_ECOLI	GLYCEROL-3-PHOSPHATE REGULON REPRESSOR	ESCHERICHIA COLI	5-32								
PGLPX_ECOLI	GLPX PROTEIN	ESCHERICHIA COLI	297-324								
PGLPX_SHIFL	GLPX PROTEIN	SHIGELLA FLEXNERI	297-324								
PGLUX_ECOLI	GLUTAREDOXIN	ESCHERICHIA COLI	24-51								
PGLTB_ECOLI	GLUTAMATE SYNTHASE	ESCHERICHIA COLI	482-509								
PGLTP_ECOLI	PROTON GLUTAMATE SYMPORT PROTEIN	ESCHERICHIA COLI	319-346								
PGLYB_BRAJA	PHOSPHOTRANSFERASE ENZYME TYPE IIB	BRADYRHIZOBIUM JAPONICUM	130-157								
PGLYA_BRAJA	SERINE HYDROXYMETHYLTRANSFERASE	BRADYRHIZOBIUM JAPONICUM	29-60								
PGLYA_CAMJE	SERINE HYDROXYMETHYLTRANSFERASE	CAMPYLOBACTER JEJUNI	376-403								
PGLYA_HYPME	SERINE HYDROXYMETHYLTRANSFERASE	HYPHOMICROBIUM METHYLOVORUM	28-55								
PGM37_BACSU	COMG OPERON PROTEIN 7	BACILLUS SUBTILIS	17-67	88-127							
PGNTK_BACSU	GLUCONOKINASE	BACILLUS SUBTILIS	238-271								
PGP1D_CHLTR	VIRULENCE PROTEIN PGP1-D	CHLAMYDIA TRACHOMATIS	117-153								
PGP2D_CHLTR	VIRULENCE PROTEIN PGP2-D	CHLAMYDIA TRACHOMATIS	97-131								
PGP5D_CHLTR	VIRULENCE PROTEIN PGP5-D	CHLAMYDIA TRACHOMATIS	23-52								
PGP6D_CHLTR	VIRULENCE PROTEIN PGP6-D	CHLAMYDIA TRACHOMATIS	63-106	193-220							
PGP7D_CHLTR	VIRULENCE PROTEIN PGP7-D	CHLAMYDIA TRACHOMATIS	12-60								
PGP8D_CHLTR	VIRULENCE PROTEIN PGP8-D	CHLAMYDIA TRACHOMATIS	94-121								
PGREA_RICPR	TRANSCRIPTION ELONGATION FACTOR GREA	RICKETTSIA PROWAZEKII	15-49								
PGRPE_BACSU	GRPE-LIKE PROTEIN	BACILLUS SUBTILIS	27-73								
PGRPE_BORBU	GRPE-LIKE PROTEIN	BORRELIA BURGDORFERI	2-79								
PGRPE_CLOAB	GRPE-LIKE PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	12-83								
PGRSA_BACBR	GRAMICIDIN S SYNTHETASE	BACILLUS BREVIS	345-372	799-826	840-882	1035-1062					
PGRSB_BACBR	GRAMICIDIN S SYNTHETASE B	BACILLUS BREVIS	48-75	94-121	241-282	1128-1153	1213-1240	2162-2189	2559-2586	2819-2846	3606-3633
PGSH1_ECOLI	GLUTAMATE--CYSTEINE LIGASE	ESCHERICHIA COLI	239-266	274-301							
PGSHR_ECOLI	GLUTATHIONE REDUCTASE	ESCHERICHIA COLI	100-134	270-311							
PGSHR_PSEAE	GLUTATHIONE REDUCTASE	PSEUDOMONAS AERUGINOSA	80-114								
PGSLA_BACSU	STARVATION-INDUCIBLE PROTEIN A	BACILLUS SUBTILIS	74-101	265-296							
PGSPD_ERWCA	PROTEIN D PRECURSOR	ERWINIA CAROTOVORA	258-285	516-543	589-619						
PGSPD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	259-302	307-338	551-578	659-686					
PGSPD_KLEPN	PROTEIN D PRECURSOR	KLEBSIELLA PNEUMONIAE	259-286								
PGSPE_ERWCA	PROTEIN E	ERWINIA CAROTOVORA	329-367								
PGSPE_ERWCH	PROTEIN E	ERWINIA CHRYSANTHEMI	329-367								
PGSPE_KLEPN	PROTEIN E	KLEBSIELLA PNEUMONIAE	323-361								
PGSPE_PSEAE	PROTEIN E	PSEUDOMONAS AERUGINOSA	122-149	331-369							

PCGENE	10711784	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
ELENAME	PROTEIN	ORGANISM									
PGSPF_XANCP	PROTEIN F	XANTHOMONAS CAMPESTRIS	130-157								
PGSPH_PSEAE	PROTEIN H PRECURSOR	PSEUDOMONAS AERUGINOSA	18-59								
PGSPI_AERHY	PROTEIN I PRECURSOR	AEROMONAS HYDROPHILA	27-61								
PGSPI_ERWCA	PROTEIN I PRECURSOR	ERWINIA CAROTOVORA	35-62								
PGSPJ_KLEPN	PROTEIN J PRECURSOR	KLEBSIELLA PNEUMONIAE	140-167								
PGSPK_ERWCA	PROTEIN K	ERWINIA CAROTOVORA	28-55								
PGSPK_ERWCH	PROTEIN K	ERWINIA CHRYSANTHEMI	28-55								
PGSPK_KLEPN	PROTEIN K	KLEBSIELLA PNEUMONIAE	72-99								
PGSPK_PSEAE	PROTEIN K	PSEUDOMONAS AERUGINOSA	262-289								
PGSPL_ERWCH	PROTEIN L	ERWINIA CHRYSANTHEMI	7-42	248-286	331-358						
PGSPL_XANCP	PROTEIN L	XANTHOMONAS CAMPESTRIS	39-73	297-324							
PGSPM_ERWCA	PROTEIN M	ERWINIA CAROTOVORA	108-145								
PGSQD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	259-301	448-475	546-573	657-684					
PGTF1_STRDO	GLUCOSYLTRANSFERASE-1 PRECURSOR	STREPTOCOCCUS DOWNEI	42-69	177-204	212-239	464-491	1382-1416	1495-1529			
PGTF1_STRDO	GLUCOSYLTRANSFERASE-1 PRECURSOR	STREPTOCOCCUS DOWNEI	171-198	206-233	458-485	1382-1412	1497-1524				
PGTFA_STRMU	GLUCOSYLTRANSFERASE-S	STREPTOCOCCUS MUTANS	297-330								
PGTFB_STRMU	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS MUTANS	42-93	110-137	161-188	199-246	313-347	592-627			
PGTFC_STRMU	GLUCOSYLTRANSFERASE-SI PRECURSOR	STREPTOCOCCUS MUTANS	4-40	110-138	215-262	330-361	614-653				
PGTFS_STRDO	GLUCOSYLTRANSFERASE-S PRECURSOR	STREPTOCOCCUS DOWNEI	275-316	436-463	1281-1315						
PGTMR_METTF	POSSIBLE G-T MISMATCHES REPAIR ENZYME	METHANOBACTERIUM THERMOFORMICICUM	80-107	148-175							
PGUAA_BACSU	GMP SYNTHASE	BACILLUS SUBTILIS	314-348	399-436	478-505						
PGUAA_ECOLI	GMP SYNTHASE	ESCHERICHIA COLI	105-131								
PGUB_BACCI	BETA-GLUCANASE PRECURSOR	BACILLUS CIRCULANS	164-191								
PGUB_BACLI	BETA-GLUCANASE PRECURSOR	BACILLUS LICHENIFORMIS	133-166								
PGUB_BACMA	BETA-GLUCANASE PRECURSOR	BACILLUS MACERANS	126-160								
PGUN1_BACS4	ENDOGLUCANASE A	BACILLUS SP	18-49								
PGUN1_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304	376-403							
PGUN1_BUTFI	ENDOGLUCANASE I	BUTYRIVIBRIO FIBRISOLVENS	154-181	452-495							
PGUN2_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUN2_THEFU	ENDOGLUCANASE E-2 PRECURSOR	THERMOMONOSPORA FUSCA	201-228								
PGUN3_BACS4	ENDOGLUCANASE C PRECURSOR	BACILLUS SP	110-137	348-378	538-565						
PGUN3_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUN3_FIBSU	ENDOGLUCANASE 3 PRECURSOR	FIBROBACTER SUCCINOGENES	542-586								
PGUN4_THEFU	ENDOGLUCANASE E-4 PRECURSOR	THERMOMONOSPORA FUSCA	308-342								
PGUN5_THEFU	ENDOGLUCANASE E-5 PRECURSOR	THERMOMONOSPORA FUSCA	44-71								
PGUNA_BACLA	ENDOGLUCANASE A PRECURSOR	BACILLUS LAUTUS	410-437	434-481							
PGUNA_CLOTM	ENDOGLUCANASE A PRECURSOR	CLOSTRIDIUM THERMOCELLUM	334-384								
PGUNA_PSEFL	ENDOGLUCANASE A PRECURSOR	PSEUDOMONAS FLUORESCENS	762-789								
PGUNA_RUMAL	ENDOGLUCANASE A	RUMINOCOCCUS ALBUS	294-321								
PGUNA_RUMFL	CELLODEXTRINASE A	RUMINOCOCCUS FLAVEFACIENS	276-303								
PGUNB_BACLA	ENDOGLUCANASE B PRECURSOR	BACILLUS LAUTUS	375-430								
PGUNB_CALSA	ENDOGLUCANASE B	CALDOCELLUM SACCHAROLYTICUM	151-182	444-478							
PGUNB_CELFI	ENDOGLUCANASE B PRECURSOR	CELLULOMONAS FIMI	266-293								
PGUNB_CLOCL	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM CELLULOVORANS	144-171	266-300							
PGUNB_CLOTM	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM THERMOCELLUM	514-541								
PGUNC_CELFI	ENDOGLUCANASE C PRECURSOR	CELLULOMONAS FIMI	881-908								
PGUNC_PSEFL	ENDOGLUCANASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	52-82								
PGUND_CLOCE	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	382-453								
PGUND_CLOCL	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	145-172	271-298							
PGUNE_CLOTM	ENDOGLUCANASE E PRECURSOR	CLOSTRIDIUM THERMOCELLUM	158-185	207-234	284-311						
PGUNH_CLOTM	ENDOGLUCANASE H PRECURSOR	CLOSTRIDIUM THERMOCELLUM	46-73	425-452							
PGUNS_ERWCA	ENDOGLUCANASE PRECURSOR	ERWINIA CAROTOVORA	20-47	115-149							
PGUNX_CLOTM	PUTATIVE ENDOGLUCANASE X	CLOSTRIDIUM THERMOCELLUM	105-139								
PGUNZ_CLOSR	ENDOGLUCANASE Z PRECURSOR	CLOSTRIDIUM STERCORARIUM	296-326	322-349							
PGUN_BACPO	ENDOGLUCANASE	BACILLUS POLYMYXA	198-225								
PGUN_BACS1	ENDOGLUCANASE PRECURSOR	BACILLUS SP	321-348								
PGUN_BACS6	ENDOGLUCANASE PRECURSOR	BACILLUS SP	198-229	301-328	623-664						

PIGENE	10?a17Ba4	Prokaryotic Sequences									
ENTNAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA1	AREA9
PGUTD_ECOLI	SORBITOL-6-PHOSPHATE 2-DEHYDROGENASE	ESCHERICHIA COLI	118-165								
PGVP1_HALJA	GAS VESICLE PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	36-63								
PGVP1_HALJA	GAS VESICLE PROTEIN, CHROMOSOMAL	HALOBACTERIUM HALOBIUM	36-63								
PGVPA_APHFL	GAS VESICLE PROTEIN	APHANIZOMENON FLOS-AQUAE	4-31	39-66							
PGVPA_FREDI	GAS VESICLE PROTEIN	FREMYELLA DIPLOSIPHON	4-31	39-66							
PGVPA_HALMÆ	GAS VESICLE PROTEIN	HALOBACTERIUM MEDITERRANEI	37-64								
PGVPA_MICBC	GAS VESICLE PROTEIN	MICROCYSTIS SP	39-66								
PGVPA_PSEAN	GAS VESICLE PROTEIN	PSEUDOANABAENA SP	4-31	39-66							
PGVPC_APHFL	GAS VESICLE PROTEIN C	APHANIZOMENON FLOS-AQUAE	8-49								
PGVPC_HALJA	GAS VESICLE PROTEIN C	HALOBACTERIUM HALOBIUM	150-249								
PGVPC_HALME	GAS VESICLE PROTEIN C	HALOBACTERIUM MEDITERRANEI	139-169								
PGVPD_HALJA	GVPD PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	110-147								
PGVPD_HALME	GVPD PROTEIN	HALOBACTERIUM MEDITERRANEI	110-147								
PGVPF_HALJA	GVPF PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	13-47	133-169							
PGVPF_HALME	GVPF PROTEIN	HALOBACTERIUM MEDITERRANEI	13-47								
PGVPF_HALSA	GVPF PROTEIN	HALOBACTERIUM SALINARIUM	8-49								
PGVPG_HALJA	GVPG PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	38-65								
PGVPG_HALME	GVPG PROTEIN	HALOBACTERIUM MEDITERRANEI	38-72								
PGVPH_HALJA	GVPH PROTEIN	HALOBACTERIUM HALOBIUM	10-40								
PGVPI_HALME	GVPI PROTEIN	HALOBACTERIUM MEDITERRANEI	5-32								
PGVPK_HALJA	GVPK PROTEIN	HALOBACTERIUM HALOBIUM	45-76								
PGVPK_HALME	GVPK PROTEIN	HALOBACTERIUM MEDITERRANEI	12-39	47-74							
PGVPK_HALSA	GVPK PROTEIN	HALOBACTERIUM SALINARIUM	11-38	50-77							
PGVPL_HALME	GVPL PROTEIN	HALOBACTERIUM MEDITERRANEI	44-78								
PGVPN_HALJA	GVPN PROTEIN	HALOBACTERIUM HALOBIUM	113-140								
PGVPN_HALME	GVPN PROTEIN	HALOBACTERIUM MEDITERRANEI	15-56								
PGVPO_HALME	GVPO PROTEIN	HALOBACTERIUM MEDITERRANEI	69-96	103-132							
PGYRA_BACSU	DNA GYRASE SUBUNIT A	BACILLUS SUBTILIS	380-407	429-499							
PGYRA_CAMJE	DNA GYRASE SUBUNIT A	CAMPYLOBACTER JEJUNI	267-310	381-408	432-479	665-695					
PGYRA_ECOLI	DNA GYRASE SUBUNIT A	ESCHERICHIA COLI	266-293	449-497							
PGYRA_KLEPN	DNA GYRASE SUBUNIT A	KLEBSIELLA PNEUMONIAE	266-293	448-496	518-545						
PGYRA_MYCPN	DNA GYRASE SUBUNIT A	MYCOPLASMA PNEUMONIAE	4-31								
PGYRA_STAAU	DNA GYRASE SUBUNIT A	STAPHYLOCOCCUS AUREUS	129-156	346-373	430-479	647-674	812-839				
PGYRB_BACSU	DNA GYRASE SUBUNIT B	BACILLUS SUBTILIS	198-239								
PGYRB_BORBU	DNA GYRASE SUBUNIT B	BORRELIA BURGDORFERI	154-181								
PGYRB_ECOLI	DNA GYRASE SUBUNIT B	ESCHERICHIA COLI	616-643								
PGYRB_HALSQ	DNA GYRASE SUBUNIT B	HALOFERAX SP	210-237								
PGYRB_MYCPN	DNA GYRASE SUBUNIT B.	MYCOPLASMA PNEUMONIAE	249-283								
PGYRB_NEIGO	DNA GYRASE SUBUNIT B	NEISSERIA GONORRHOEAE	324-358	618-645							
PGYRB_PSEPU	DNA GYRASE SUBUNIT B	PSEUDOMONAS PUTIDA	122-149	684-711							
PGYRB_SPICI	DNA GYRASE SUBUNIT B	SPIROPLASMA CITRI	40-74	189-238	283-310	341-368	540-579				
PGYRB_STAAU	DNA GYRASE SUBUNIT B	STAPHYLOCOCCUS AUREUS	252-279	291-318							
PHDIA_ECOLI	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	ESCHERICHIA COLI	71-98								
PHEL_D_ECOLI	HELICASE IV	ESCHERICHIA COLI	100-134	329-356							
PHEL_HAEIN	LIPOPROTEIN E PRECURSOR	HAEMOPHILUS INFLUENZAE	58-85								
PIEN1_CHLVI	GLUTAMYL-TRNA REDUCTASE	CHLOROBIUM VIBRIOFORMES	233-259								
PIEN1_ECOLI	GLUTAMYL-TRNA REDUCTASE	ESCHERICHIA COLI	289-316								
PIEN1_RHOSH	5-AMINOLEVULINIC ACID SYNTHASE	RHODOBACTER SPHAEROIDES	73-100								
PIEN1_SALTY	GLUTAMYL-TRNA REDUCTASE (	SALMONELLA TYPHIMURIUM	289-316	344-371							
PIEN1_SYNY3	GLUTAMYL-TRNA REDUCTASE	SYNECHOCYSTIS SP	163-190	330-377							
PIEN2_METSC	DELTA-AMINOLEVULINIC ACID DEHYDRATASE	METHANOTHERMUS SOCIABILIS	131-158								
PIEN4_BACSU	PUTATIVE UROPORPHYRINOGEN-III SYNTHASE	BACILLUS SUBTILIS	10-37								
PIEN4_ECOLI	UROPORPHYRINOGEN-III SYNTHASE	ESCHERICHIA COLI	211-238								
PIEN_M_ECOLI	HEMM PROTEIN	ESCHERICHIA COLI	147-174								
PIEN_R_YEREN	HEMIN RECEPTOR PRECURSOR	YERSINIA ENTEROCOLITICA	234-261								
PIENX_ECOLI	PUTATIVE METHYLTRANSFERASE	ESCHERICHIA COLI	69-138	185-219							
PIENY_BACSU	HEMY PROTEIN	BACILLUS SUBTILIS	217-262								

PCGENE (07:17 Tue 4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEM2_BACSU	FERROCHELATASE	BACILLUS SUBTILIS	199-226								
PHETA_ANASP	HETEROCYST DIFFERENTIATION PROTEIN	ANABAENA SP	184-211	337-398	521-565						
PHEXA_STRPN	DNA MISMATCH REPAIR PROTEIN HEXA	STREPTOCOCCUS PNEUMONIAE	426-460								
PHEXB_STRPN	DNA MISMATCH REPAIR PROTEIN HEXB	STREPTOCOCCUS PNEUMONIAE	470-497								
PHFAB_CAUCR	POS TRANSACTIVATOR PROTEIN HFAB	CAULOBACTER CRESCENTUS	98-125								
PHFLC_ECOLI	HFLC PROTEIN	ESCHERICHIA COLI	113-140								
PHFLX_ECOLI	GTP-BINDING PROTEIN HFLX	ESCHERICHIA COLI	169-196								
PHFQ_ECOLI	HOST FACTOR-I PROTEIN	ESCHERICHIA COLI	24-51								
PHIFC_HAEIN	PILIATION PROTEIN HIFC PRECURSOR	HAEMOPHILUS INFLUENZAE	356-383	404-431	447-474						
PHIS2_LACLA	PHOSPHORIBOSYL-AMP CYCLOHYDROLASE	LACTOCOCCUS LACTIS	126-174								
PHIS4_ECOLI	P-3-A CARBOXAMIDE RIBOTIDE	ESCHERICHIA COLI	125-159								
PHIS4_LACLA	P-3-A CARBOXAMIDE RIBOTIDE	LACTOCOCCUS LACTIS	49-89	181-228							
PHIS4_METVA	P-3-A CARBOXAMIDE RIBOTIDE	METHANOCOCCUS VANNIELII	115-142								
PHIS4_SALTY	P-3-A CARBOXAMIDE RIBOTIDE	SALMONELLA TYPHIMURIUM	125-159								
PHIS5_LACLA	AMIDOTRANSFERASE HIS5H	LACTOCOCCUS LACTIS	7-34								
PHIS6_ECOLI	HIS5 PROTEIN	ESCHERICHIA COLI	39-66	142-169							
PHIS6_SALTY	HIS5 PROTEIN	SALMONELLA TYPHIMURIUM	39-66	142-169							
PHIS7_ECOLI	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	ESCHERICHIA COLI	168-199								
PHIS7_SALTY	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	SALMONELLA TYPHIMURIUM	161-199								
PHIS8_ECOLI	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	ESCHERICHIA COLI	290-317								
PHIS8_HALVO	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	HALOBACTERIUM VOLCANII	174-201								
PHISA_LACLA	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	LACTOCOCCUS LACTIS	161-188								
PHISB_SALTY	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	SALMONELLA TYPHIMURIUM	297-320								
PHISQ_SALTY	HISTIDINE PERMEASE MEMBRANE Q PROTEIN	SALMONELLA TYPHIMURIUM	8-35								
PHISX_ECOLI	HISTIDINOL DEHYDROGENASE	ESCHERICHIA COLI	393-434								
PHISX_LACLA	HISTIDINOL DEHYDROGENASE	LACTOCOCCUS LACTIS	19-46	264-303							
PHISX_MYCSM	HISTIDINOL DEHYDROGENASE	MYCOBACTERIUM SMEGMATIS	288-329	399-430							
PHISX_SALTY	HISTIDINOL DEHYDROGENASE	SALMONELLA TYPHIMURIUM	393-434								
PHLA_STAAU	ALPHA-HEMOLYSIN PRECURSOR	STAPHYLOCOCCUS AUREUS	69-103								
PHLY1_ECOLI	HEMOLYSIN A, CHROMOSOMAL	ESCHERICHIA COLI	5-32	76-103	161-224	224-261	353-380	458-492	554-581	642-728	
PHLY2_ECOLI	HAEMOLYSIN SECRETION PROTEIN, CHROMOSOMAL	ESCHERICHIA COLI	487-514								
PHLY4_ECOLI	HEMOLYSIN D, CHROMOSOMAL	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLYA_ACTPL	HEMOLYSIN	ACTINOBACILLUS PLEUROPNEUMONIAE	5-39	136-170	184-218	273-300	330-377	459-527	846-924		
PHLYA_ACTSU	HEMOLYSIN	ACTINOBACILLUS SUIS	5-39	136-170	184-218	273-300	330-377	459-500	846-924		
PHLYA_ECOLI	HEMOLYSIN A, PLASMID	ESCHERICHIA COLI	5-32	76-103	161-262	334-381	432-493	553-582	643-729		
PHLYA_PROMI	HEMOLYSIN PRECURSOR	PROTEUS MIRABILIS	165-196	299-338	350-400	423-471	498-525	528-576	610-695	705-742	747-774
			789-823	841-868	966-993	1113-1140	1166-1193	1225-1273	1301-1342	1391-1461	1483-1527
PHLYA_SERMA	HEMOLYSIN PRECURSOR	SERRATIA MARCESCENS	311-345	477-504	558-585	625-703	718-745	830-864	1081-1108	1135-1202	1249-1286
			1516-1553								
PHLYA_VIBCH	HEMOLYSIN PRECURSOR	VIBRIO CHOLERAE	335-369	618-665							
PHLYB_ACTPL	HAEMOLYSIN SECRETION PROTEIN	ACTINOBACILLUS PLEUROPNEUMONIAE	34-61								
PHLYB_ECOLI	HAEMOLYSIN SECRETION PROTEIN, PLASMID	ESCHERICHIA COLI	487-514								
PHLYB_PROMI	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	PROTEUS MIRABILIS	16-64	499-547							
PHLYB_PROVU	HAEMOLYSIN SECRETION PROTEIN	PROTEUS VULGARIS	34-68	487-514							
PHLYB_SERMA	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	SERRATIA MARCESCENS	110-137								
PHLYB_VIBCH	HEMOLYSIN SECRETION PROTEIN PRECURSOR	VIBRIO CHOLERAE	335-398	413-447	458-524						
PHLYC_ACTPL	HEMOLYSIN C	ACTINOBACILLUS PLEUROPNEUMONIAE	130-157								
PHLYD_ACTPL	HEMOLYSIN SECRETION PROTEIN APPD	ACTINOBACILLUS PLEUROPNEUMONIAE	191-331								
PHLYD_ECOLI	HEMOLYSIN D, PLASMID	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLY_HALI7	HALOLYSIN PRECURSOR	HALOPHILIC BACTERIA STRAIN 172P1	484-516								
PHMC_DESVH	47.3 KD PROTEIN IN HMC OPERON	DESULFOVIBRIO VULGARIS	136-186								
PHMD_METKA	H(2)-FORMING DEHYDROGENASE	METHANOPYRUS KANDLERI	36-63								
PHNS_SERMA	DNA-BINDING PROTEIN H-NS	SERRATIA MARCESCENS	35-62								
PHOLA_ECOLI	DNA POLYMERASE III, DELTA SUBUNIT	ESCHERICHIA COLI	94-121	288-322							
PHOXA_BRAJA	REG PROTEIN HOXA	BRADYRHIZOBIUM JAPONICUM	113-163	444-471							
PHOXF_NOCOP	HOXS ALPHA SUBUNIT	NOCARDIA OPACA	4-31								
PHOXQ_ALCEU	HOXQ PROTEIN	ALCALIGENES EUTROPHUS	76-110								

TCGENE	10711784	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHOXX_BRAJA	HOXX PROTEIN	BRADYRHIZOBIUM JAPONICUM	356-383								
P1PI_DEIRA	HEXAGONALLY SURFACE PROTEIN PRECURSOR	DEINOCOCCUS RADIODURANS	581-612								
P1PAT_LACLA	PHOSPHORIBOSYLTRANSFERASE	LACTOCOCCUS LACTIS	3-30	71-105							
P1RDD_STRCO	SIGMA FACTOR HRDD	STREPTOMYCES COELICOLOR	296-323								
P1RDB_BURSO	REGULATORY PROTEIN HRPB	BURKHOLDERIA SOLANACEARUM	371-405								
P1RPH_PSESY	OUTER MEMBRANE PROTEIN HRPH PRECURSOR	PSEUDOMONAS SYRINGAE	102-139	310-344							
P1RP5_PSESH	PROBABLE REGULATORY PROTEIN HRP5	PSEUDOMONAS SYRINGAE	34-51								
P1S18_CLOAB	18 KD HEAT SHOCK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	67-108								
P1S70_HALMA	HEAT SHOCK 70 KD PROTEIN	HALOARCULA MARISMORTUI	5-536								
P1S70_MYCLE	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM LEPRAE	464-488	461-519							
P1S70_ANYCA	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM PARATUBERCULOSIS	460-487								
P1TPG_ECOLI	HEAT SHOCK PROTEIN C63 3	ESCHERICHIA COLI	231-248	482-499							
P1TRA_ECOLI	PROTEASE DO PRECURSOR	ESCHERICHIA COLI	373-409								
P1TRE_ECOLI	HTRE PROTEIN PRECURSOR	ESCHERICHIA COLI	433-484	524-576							
P1TRJ_HALHA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM HALOBIUM	413-431	479-506							
P1TRJ_HALSA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM SALINARIUM	414-449	413-431	479-506						
P1UTP_BACSU	HUT OPERON POSITIVE REGULATORY PROTEIN	BACILLUS SUBTILIS	5-36								
P1VTJ_LACHE	HELVETICIN J	LACTOBACILLUS HELVETICUS	174-212	206-233							
P1YCA_ECOLI	FORMATE HYDROGENLYASE SUBUNIT 1	ESCHERICHIA COLI	33-100	106-113							
P1YDO_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	ESCHERICHIA COLI	251-278								
P1YDO_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	SALMONELLA TYPHIMURIUM	251-278								
P1YDH_ECOLI	SENSOR PROTEIN HYDH	ESCHERICHIA COLI	312-339	360-387							
P1YUB_PSESN	HYDANTOIN UTILIZATION PROTEIN B	PSEUDOMONAS SP	354-381								
P1YUC_PSESN	HYDANTOIN UTILIZATION PROTEIN	PSEUDOMONAS SP	6-40	96-123							
P1AL_PSESS	ENDOLEACETATE-LYSINE LIGASE	PSEUDOMONAS SYRINGAE	133-160	297-331							
P1AP_ECOLI	ALK PHOS ISOZYME CONVERSION PROTEIN	ESCHERICHIA COLI	74-101								
P1CEN_ERWAN	ICE NUCLEATION PROTEIN	ERWINIA ANANAS	326-353	422-449	534-561	614-641	662-689	721-748	758-785	854-881	930-977
			1046-1073								
P1CEN_ERWHE	ICE NUCLEATION PROTEIN	ERWINIA HERBICOLA	310-337	408-435	534-561	646-673	694-721	838-865	886-913	982-1009	
P1CEN_PSEFL	ICE NUCLEATION PROTEIN	PSEUDOMONAS FLUORESCENS	281-308	377-404	425-452	681-708	729-781	795-832			
P1CEN_PSESY	ICE NUCLEATION PROTEIN	PSEUDOMONAS SYRINGAE	564-602	772-847	868-895	909-943					
P1CEN_XANCT	ICE NUCLEATION PROTEIN	XANTHOMONAS CAMPESTRIS	496-534	555-582	1168-1204	1248-1275					
P1CIB_SHIFL	INTERCELLULAR SPREAD PROTEIN	SHIGELLA FLEXNERI	41-105	438-467							
P1F1_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	540-567	681-708							
P1F1_BACSU	INITIATION FACTOR IF-2	BACILLUS SUBTILIS	173-208	394-421							
P1F1_ECOLI	INITIATION FACTOR IF-2	ESCHERICHIA COLI	686-724	815-862							
P1F1_ENTFC	INITIATION FACTOR IF-2	ENTEROCOCCUS FAECIUM	579-627								
P1F1_BACST	INITIATION FACTOR IF-3	BACILLUS STEAROTHERMOPHILUS	3-34								
P1F3_ECOLI	INITIATION FACTOR IF-3	ESCHERICHIA COLI	27-54	70-97							
P1F3_KLEPN	INITIATION FACTOR IF-3	KLEBSIELLA PNEUMONIAE	27-54	70-97							
P1F3_MYCPE	INITIATION FACTOR IF-3	MYCOPLASMA FERMENTANS	177-211								
P1F3_PROVU	INITIATION FACTOR IF-3	PROTEUS VULGARIS	2-39	70-97							
P1F3_SALTY	INITIATION FACTOR IF-3	SALMONELLA TYPHIMURIUM	27-54	70-97							
P1F3_SERMA	INITIATION FACTOR IF-3	SERRATIA MARCESCENS	19-46	70-97							
P1GA_NEIGO	IGA-SPECIFIC SERINE ENDOPEPTIDASE	NEISSERIA GONORRHOEAE	245-272	287-314	833-860	1024-1058	1377-1404	1483-1531			
P1GGB_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	195-222						
P1GGG_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	195-225	270-297					
P1LYH_ECOLI	ACETOLACTATE SYNTHASE	ESCHERICHIA COLI	47-81	120-147							
P1LYH_SALTY	ACETOLACTATE SYNTHASE	SALMONELLA TYPHIMURIUM	47-81	120-147							
P1LYN_LACLA	ACETOLACTATE SYNTHASE	LACTOCOCCUS LACTIS	20-73								
P1MPB_SALTY	IMPB PROTEIN	SALMONELLA TYPHIMURIUM	185-212								
P1NP_ACICA	INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE	ACINETOBACTER CALCOACETICUS	166-193								
P1NP_BACSU	E-5'-MONOPHOSPHATE DEHYDROGENASE	BACILLUS SUBTILIS	159-186								
P1NA_BACTL	INHIBITOR A PRECURSOR	BACILLUS THURINGIENSIS	103-130	324-358							
P1NL_LISMO	INTERNALIN A	LISTERIA MONOCYTOGENES	106-143	161-188	196-232						
P1NL_LISMO	INTERNALIN B PRECURSOR	LISTERIA MONOCYTOGENES	51-94	166-200	385-415						
P1NY_YEREN	INVASIN	YERSINIA ENTEROCOLITICA	501-535								

PCGENE	107a17Bs4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PIPA7_SHDFL	60 KD ANTIGEN	SHIGELLA FLEXNERI	285-312								
PIPA4_SHDFL	70 KD ANTIGEN	SHIGELLA FLEXNERI	93-136	437-475	493-557	596-630					
PIPAB_SHIDY	62 KD MEMBRANE ANTIGEN	SHIGELLA DYSENTERIAE	28-55	71-169	480-507	522-556					
PIPAB_SHIFL	62 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	28-55	71-169	480-507	522-556					
PIPAC_SHIDY	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA DYSENTERIAE	21-57	113-161	273-300	324-378					
PIPAC_SHIFL	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA FLEXNERI	28-57	113-161	273-300	324-372					
PIPAD_SHIDY	37 KD MEMBRANE ANTIGEN IPAD	SHIGELLA DYSENTERIAE	47-86	291-318							
PIPAD_SHIFL	36 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	47-86	259-286	291-318						
PIPGB_SHIDY	IPGB PROTEIN	SHIGELLA DYSENTERIAE	175-202								
PIPGB_SHIFL	IPGB PROTEIN	SHIGELLA FLEXNERI	175-202								
PIPT_PSEES	ISOPENTENYL TRANSFERASE	PSEUDOMONAS STRINGAE	33-87	143-173							
PIPYR_ECOLI	INORGANIC PYROPHOSPHATASE	ESCHERICHIA COLI	138-172								
PIRGA_VIBCH	VIRULENCE PROTEIN PRECURSOR	VIBRIO CHOLERAE	212-239	336-377							
PIRGB_VIBCH	VIRULENCE REGULATORY PROTEIN IRGB	VIBRIO CHOLERAE		67-97							
PIRPA_SYNP7	IRON-REGULATED PROTEIN A	SYNECHOCOCCUS SP	167-184								
PISBD_SHIDY	INSERTION ELEMENT ISO-ISID PROTEIN INSB	SHIGELLA DYSENTERIAE	86-113								
PISBN_SHIDY	INSERTION ELEMENT ISO-ISIN PROTEIN INSB	SHIGELLA DYSENTERIAE	6-37								
PISB_ECOLI	INSERTION ELEMENT IS1 PROTEIN INSB	ESCHERICHIA COLI	122-149								
PISB_SHIFL	INSERTION ELEMENT IS1 PROTEIN INSB	SHIGELLA FLEXNERI	86-113								
PISB_SHISO	INSERTION ELEMENT IS1 PROTEIN INSB	SHIGELLA SONNEI	86-113								
PISF1_BACSU	MAJOR INTRACELLULAR SERINE PROTEASE	BACILLUS SUBTILIS	115-142	197-224	233-280						
PISP_BACPO	INTRACELLULAR SERINE PROTEASE	BACILLUS POLYMYXA	109-143								
PISTA_ECOLI	ISTA PROTEIN	ESCHERICHIA COLI	181-210								
PISTA_SHISO	ISTA PROTEIN	SHIGELLA SONNEI	181-210								
PIUTA_ECOLI	FERRIC AEROBACTIN RECEPTOR PRECURSOR	ESCHERICHIA COLI	186-213	525-552	559-593						
PJAG_BACSU	JAG PROTEIN	BACILLUS SUBTILIS	68-95								
PK6P2_ECOLI	6-PHOSPHOFRUCTOKINASE ISOZYME 2	ESCHERICHIA COLI	143-170								
PKAD_BACSU	ADENYLATE KINASE	BACILLUS SUBTILIS	188-215								
PKAD_LACLA	ADENYLATE KINASE	LACTOCOCCUS LACTIS	186-213								
PKANU_BACSP	KANAMYCIN NUCLEOTIDYLTRANSFERASE	BACILLUS SP	69-96								
PKANU_STAAU	KANAMYCIN NUCLEOTIDYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	69-96								
PKDGT_ECOLI	2-KETO-3-DEOXYGLUCONATE PERMEASE	ESCHERICHIA COLI	70-97								
PKDGT_ERWCH	2-KETO-3-DEOXYGLUCONATE PERMEASE	ERWINIA CHRYSANTHEMI	126-153								
PKDTA_ECOLI	3-DEOXY-D-MANNO-OCTULOSONIC-ACID TRANS	ESCHERICHIA COLI	369-396								
PKGTP_ECOLI	ALPHA-KETOGLUTARATE PERMEASE	ESCHERICHIA COLI	7-34								
PKGUA_ECOLI	GUANYLATE KINASE	ESCHERICHIA COLI	163-189								
PKHSE_BACSU	HOMOSERINE KINASE	BACILLUS SUBTILIS	49-76								
PKHSE_FREDI	HOMOSERINE KINASE	FREMYELLA DIPLOSIPHON	52-79								
PKKA4_BACCI	AMINOGLYCOSIDE 3'-PHOSPHOTRANSFERASE	BACILLUS CIRCULANS	12-39								
PKORB_ECOLI	KORB TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	228-255								
PKPY1_SPICI	PYRUVATE KINASE	SPIROPLASMA CITRI	112-148								
PKPYK_BACST	PYRUVATE KINASE	BACILLUS STEAROTHERMOPHILUS	331-374								
PLACA_STAAU	ISOMERASE LACA SUBUNIT	STAPHYLOCOCCUS AUREUS	9-64								
PLACA_STRMU	ISOMERASE LACA SUBUNIT	STREPTOCOCCUS MUTANS	26-60								
PLACC_STRMU	TAGATOSE-6-PHOSPHATE KINASE	STREPTOCOCCUS MUTANS	56-83	283-310							
PLACG_LACCA	6-PHOSPHO-BETA-GALACTOSIDASE	LACTOBACILLUS CASEI	290-317								
PLACI_ECOLI	LACTOSE OPERON REPRESSOR	ESCHERICHIA COLI	9-36								
PLACI_KLEPN	LACTOSE OPERON REPRESSOR	KLEBSIELLA PNEUMONIAE	195-229								
PLACR_STAAU	PHOSPHOTRANSFERASE REPRESSOR	STAPHYLOCOCCUS AUREUS	2-29								
PLACR_STRMU	PHOSPHOTRANSFERASE REPRESSOR	STREPTOCOCCUS MUTANS	2-32								
PLACY_LACDE	LACTOSE PERMEASE	LACTOBACILLUS DELBRUECKII	196-230								
PLAFB_VIBPA	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	VIBRIO PARAHAEMOLYTICUS	62-89	388-415							
PLAMB_KLEPN	MALTOPORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	337-364								
PLAMU_CLOTM	ENDO-1,3(4)-BETA-GLUCANASE PRECURSOR	CLOSTRIDIUM THERMOCELLUM	132-159								
PLASI_PSEAE	OHHL SYNTHESIS PROTEIN LASI	PSEUDOMONAS AERUGINOSA	171-198								
PLCGI_LEUGE	PROBABLE LEUCOCIN A IMMUNITY PROTEIN	LEUCONOSTOC GELIDUM	41-71								
PLCNC_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCNC	LACTOCOCCUS LACTIS	162-189	207-234	388-433						

PCGENE	10fe17ba4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PLCND_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCND	LACTOCOCCUS LACTIS	99-126	140-202	217-307						
PLCRD_YEREN	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA ENTEROCOLITICA	122-149	491-518							
PLCRD_YERPE	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA PESTIS	122-149	491-518							
PLCRV_YERPE	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PESTIS	22-49	137-184	240-267						
PLCRV_YERPS	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PSEUDOTUBERCULOSIS	22-49	240-267							
PLCTB_BACCA	LCTB PROTEIN	BACILLUS CALDOTENAX	18-45								
PLCTD_BACST	LCTD PROTEIN	BACILLUS STEAROTHERMOPHILUS	14-41								
PLDHD_LACPL	D-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	51-81								
PLDHP_BACPS	L-LACTATE DEHYDROGENASE P	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-272	279-306						
PLDHX_BACPS	L-LACTATE DEHYDROGENASE X	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-275	279-306						
PLDH_BACAE	L-LACTATE DEHYDROGENASE	BACILLUS NEGATERIUM	244-274								
PLDH_BACST	L-LACTATE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	241-268	279-313							
PLDH_BACSU	L-LACTATE DEHYDROGENASE	BACILLUS SUBTILIS	8-42	240-267							
PLDH_BIFLO	L-LACTATE DEHYDROGENASE	BIFIDOBACTERIUM LONGUM	22-49								
PLDH_LACPL	L-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	197-231								
PLDH_LISMO	L-LACTATE DEHYDROGENASE	LISTERIA MONOCYTOGENES	42-69								
PLDH_MYCHY	L-LACTATE DEHYDROGENASE	MYCOPLASMA HYOPNEUMONIAE	276-310								
PLDH_THEAQ	L-LACTATE DEHYDROGENASE	THERMUS AQUATICUS	3-30								
PLEF_BACAN	LETHAL FACTOR PRECURSOR	BACILLUS ANTHRACIS	185-192	304-331	480-514	548-578	619-658	737-764			
PLEPA_PSEFL	LEPA PROTEIN	PSEUDOMONAS FLUORESCENS	23-50								
PLEP_BACSU	SIGNAL PEPTIDASE I	BACILLUS SUBTILIS	3-30								
PLEU1_ECOLI	2-ISOPROPYLMALATE SYNTHASE	ESCHERICHIA COLI	437-464								
PLEU1_LACLA	2-ISOPROPYLMALATE SYNTHASE	LACTOCOCCUS LACTIS	22-49	379-484							
PLEU3_BACCO	3-ISOPROPYLMALATE DEHYDROGENASE	BACILLUS COAGULANS	331-358								
PLEU3_CLOPA	3-ISOPROPYLMALATE DEHYDROGENASE	CLOSTRIDIUM PASTEURIANUM	185-212								
PLEUD_LACLA	3-ISOPROPYLMALATE DEHYDRATASE	LACTOCOCCUS LACTIS	163-190								
PLEVR_BACSU	TRANSCRIPTIONAL REGULATORY PROTEIN LEVR	BACILLUS SUBTILIS	297-324	676-703	744-774	785-822					
PLEXA_ERWCA	LEXA REPRESSOR	ERWINIA CAROTOVORA	146-173								
PLIP1_MORSP	LIPASE 1	MORAXELLA SP	26-53								
PLIP2_MORSP	LIPASE 2	MORAXELLA SP	336-363								
PLIPB_ECOLI	LIPB PROTEIN	ESCHERICHIA COLI	66-93								
PLIP_BURCE	LIPASE PRECURSOR	BURKHOLDERIA CEPACIA	176-203								
PLIP_PSEFL	LIPASE PRECURSOR	PSEUDOMONAS FLUORESCENS	8-35								
PLIP_PSES1	LIPASE PRECURSOR	PSEUDOMONAS SP	176-203								
PLIP_STAAU	LIPASE PRECURSOR	STAPHYLOCOCCUS AUREUS	80-146	512-546							
PLIVB_SALTY	LEU/ILE/VAL/THR-BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	193-220								
PLIVC_SALTY	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	195-222								
PLIVE_SALTY	AMINO ACID TRANSPORT PROTEIN LIVE	SALMONELLA TYPHIMURIUM	121-148								
PLIVE_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVE	ESCHERICHIA COLI	23-50								
PLIVJ_CITFR	LEU/ILE/VAL-BINDING PROTEIN PRECURSOR	CITROBACTER FREUNDII	195-222								
PLIVJ_ECOLI	LEU/ILE/VAL-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222								
PLIVK_ECOLI	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222								
PLIVM_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVM	ESCHERICHIA COLI	121-148								
PLKTA_ACTAC	LEUKOTOXIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	113-147	173-213	398-443	451-488	593-620	635-711			
PLKTA_PASHA	LEUKOTOXIN	PASTEURELLA HAEMOLYTICA	33-59	179-216	345-372	435-482	609-636	696-730	811-838	853-926	
PLKTB_ACTAC	LEUKOTOXIN SECRETION PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	487-514								
PLKTB_PASHA	LEUKOTOXIN SECRETION PROTEIN	PASTEURELLA HAEMOLYTICA	42-69	78-105	488-515						
PLKTC_ACTAC	LTC PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	58-85	116-150							
PLKTC_PASHA	LKTC PROTEIN	PASTEURELLA HAEMOLYTICA	123-157								
PLKTD_ACTAC	LKTD PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	116-164	205-242	278-305	364-391					
PLKTD_PASHA	LKTD PROTEIN	PASTEURELLA HAEMOLYTICA	184-289								
PLON_ECOLI	ATP-DEPENDENT PROTEASE LA	ESCHERICHIA COLI	121-148								
PLPXA_RICTY	UDP-N-ACETYLGLUCOSAMINE ACYLTRANSFERASE	RICKETTSIA RICKETTSII	229-256								
PLSPA_ECOLI	LIPOPROTEIN SIGNAL PEPTIDASE	ESCHERICHIA COLI	10-37								
PLSPA_STAAU	LIPOPROTEIN SIGNAL PEPTIDASE	STAPHYLOCOCCUS AUREUS	134-161								
PLTKF_STAAU	HEMOLYSIN F SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	161-195								
PLTKS_STAAU	HEMOLYSIN S SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	157-207								

PGENE	10711744	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PLUXA_KRYAL	ALKANAL MONOOXYGENASE ALPHA CHAIN	KRYPTOPHANARON ALFREDI	190-217								
PLUXB_PHOPO	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM PHOSPHOREUM	188-217	237-291							
PLUXB_VIBHA	ALKANAL MONOOXYGENASE BETA CHAIN	VIBRIO HARVEYI	373-400								
PLUXC_PHOLE	ACYL-COA REDUCTASE	PHOTOBACTERIUM LEIOGNATHI	44-81								
PLUXC_PHOPO	ACYL-COA REDUCTASE	PHOTOBACTERIUM PHOSPHOREUM	54-91								
PLUXC_VIBFI	ACYL-COA REDUCTASE	VIBRIO FISCHERI	16-65								
PLUXC_XENLU	ACYL-COA REDUCTASE	XENORHABDUS LUMINESCENS	39-69								
PLUXD_PHOLE	ACYL TRANSFERASE	PHOTOBACTERIUM LEIOGNATHI	89-119	218-245							
PLUXE_VIBHA	LUCIFERIN-COMPONENT LIGASE	VIBRIO HARVEYI	30-57								
PLUXF_PHOLE	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM LEIOGNATHI	145-172								
PLUXF_PHOPO	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM PHOSPHOREUM	37-85	99-126							
PLUXG_VIBFI	PROBABLE FLAVIN REDUCTASE	VIBRIO FISCHERI	137-168								
PLUXI_VIBHA	LUXGI PROTEIN	VIBRIO HARVEYI	96-123								
PLUXI_VIBFI	OIOIL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-58								
PLUXJ_VIBFI	OIOIL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-57								
PLUXP_PHOPO	LUMAZINE PROTEIN	PHOTOBACTERIUM PHOSPHORIUM	31-85	162-189							
PLUXR_VIBHA	LUXR REGULATORY PROTEIN	VIBRIO HARVEYI	61-88								
PLXBI_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	268-295								
PLXBI_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	228-255								
PLYB_BACSU	B-ENZYME	BACILLUS SUBTILIS	87-114								
PLYC_CLOAB	AUTOLYTIC LYSOZYME	CLOSTRIDIUM ACETOBUTYLICUM	91-118								
PLYSP_ECOLI	LYSINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	142-176								
PLYTB_BACSU	AMIDASE ENHANCER PRECURSOR	BACILLUS SUBTILIS	55-82	150-177	467-513	555-585					
PLYTB_ECOLI	LYTB PROTEIN	ESCHERICHIA COLI	210-237								
PLYTC_BACSU	AMIDASE PRECURSOR	BACILLUS SUBTILIS	179-213	225-253							
PLYTR_BACSU	MEMBRANE-BOUND PROTEIN LYTR	BACILLUS SUBTILIS	13-64	259-303							
PN12_STRPY	M1 PROTEIN, SEROTYPE 12 PRECURSOR	STREPTOCOCCUS PYOGENES	46-92	114-156	191-300	305-342	383-417	416-494			
PN24_STRPY	M PROTEIN, SEROTYPE 24 PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	89-128	175-202	245-272	280-313	399-457			
PN49_STRPY	M PROTEIN, SEROTYPE 49 PRECURSOR	STREPTOCOCCUS PYOGENES	12-174	269-327							
PN5_STRPY	M1 PROTEIN, SEROTYPE 5 PRECURSOR	STREPTOCOCCUS PYOGENES	5-39	56-263	306-333	352-410					
PN6_STRPY	M PROTEIN, SEROTYPE 6 PRECURSOR	STREPTOCOCCUS PYOGENES	12-39	70-282	290-324	343-401					
PNIAL_ECOLI	MALTOSE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	20-47								
PNIAL_ENTAE	MALTOSE-BINDING PROTEIN PRECURSOR	ENTEROBACTER AEROGENES	20-47								
PNIALK_ENTAE	INNER MEMBRANE PROTEIN MALK	ENTEROBACTER AEROGENES	3-30								
PNIALT_ECOLI	MALT REGULATORY PROTEIN	ESCHERICHIA COLI	852-879								
PNIALX_STRPN	MALK PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	40-67	180-207							
PNIAND_BACSU	1,4-BETA-MANNOSIDASE A AND B PREC	BACILLUS SP.	410-441								
PNIANR_CALSA	B-MANNANASE/ENDOGLUCANASE A PREC	CALDOCELLUM SACCHAROLYTICUM	389-423	592-626	1222-1256	1296-1323					
PNIAOX_BACST	MALATE OXIDOREDUCTASE	BACILLUS STEAROTHERMOPHILUS	246-273								
PNIARA_ECOLI	ANTIBIOTIC RESISTANCE PROTEIN MARR	ESCHERICHIA COLI	95-122								
PNIBFB_ECOLI	MOBILIZATION PROTEIN MBFB	ESCHERICHIA COLI	38-65	100-134							
PNIHIL_WOLSU	QUINONE-REACTIVE HYDROGENASE	WOLINELLA SUCCINOGENES	440-471								
PNICBB_ECOLI	NCBB PROTEIN	ESCHERICHIA COLI	47-74	123-163							
PNICBD_ECOLI	NCBD PROTEIN	ESCHERICHIA COLI	172-206	226-253	306-345						
PNICP1_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN I	ESCHERICHIA COLI	272-299								
PNICP2_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	ESCHERICHIA COLI	238-306								
PNICP2_SALTY	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	SALMONELLA TYPHIMURIUM	238-306								
PNICP3_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN III	ESCHERICHIA COLI	288-315								
PNICP4_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN IV	ESCHERICHIA COLI	111-145	164-191	277-304						
PNICPA_CAUCR	CHEMORECEPTOR MCPA	CAULOBACTER CRESCENTUS	260-287	369-403	516-543						
PNICPC_SALTY	CHEMOTAXIS CITRATE TRANSDUCER	SALMONELLA TYPHIMURIUM	314-348								
PNICPD_ENTAE	CHEMOTAXIS ASPARTATE TRANSDUCER	ENTEROBACTER AEROGENES	275-302								
PNICPS_ENTAE	CHEMOTAXIS SERINE TRANSDUCER	ENTEROBACTER AEROGENES	41-68	138-208	317-351	488-522					
PNICRA_ECOLI	SPECIFIC RESTRUCTION ENZYME A	ESCHERICHIA COLI	37-71								
PMCRA_METBA	METHYL-COENZYME M REDUCTASE	METHANOSARCINA BARKERI	373-405								
PMCRA_METVA	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VANNIELII	333-362								
PMCRA_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	336-363								

PEGENE	10/5/1994	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMCRB_METTE	METHYL-COENZYME M REDUCTASE	METHANOTHERMUS FERVIDUS	267-294								
PMCRB_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	247-274								
PMCRC_ECOLI	MCRC PROTEIN	ESCHERICHIA COLI	111-145								
PMCRD_METVO	REDUCTASE OPERON PROTEIN D	METHANOCOCCUS VOLTAE	54-91								
PMDH_ECOLI	MALATE DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PMDH_METFE	MALATE DEHYDROGENASE	METHANOTHERMUS FERVIDUS	54-88								
PMDH_SALTY	MALATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	127-154								
PMDL_ECOLI	MDL PROTEIN	ESCHERICHIA COLI	464-491	684-711	992-1019						
PMDOH_ECOLI	BIOSYNTHESIS PROTEIN MDOH	ESCHERICHIA COLI	119-152								
PMECI_STAEP	METHICILLIN RESIS REG PROTEIN MECI	STAPHYLOCOCCUS EPIDERMIDIS & AUREUS	88-122								
PMECR_STAEP	METHICILLIN RESISTANCE MECRI PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS & AUREUS	439-495	546-573							
PMEMB_METCA	METHANE MONOOXYGENASE COMPONENT A	METHYLOCOCCUS CAPSULATUS	214-248								
PMEMB_METTR	METHANE MONOOXYGENASE COMPONENT A	METHYLOSINUS TRICHOSPORIUM	321-348								
PMEND_ECOLI	SHCHC SYNTHASE	ESCHERICHIA COLI	333-367								
PMER4_STRLI	PROBABLE HG TRANSPORT PROTEIN	STREPTOMYCES LIVIDANS	159-186								
PMERA_BACSR	MERCURIC REDUCTASE	BACILLUS SP	146-180								
PMERA_STAAU	MERCURIC REDUCTASE	STAPHYLOCOCCUS AUREUS	292-347	352-386							
PMER_STAAU	MERCURIC RESISTANCE OPERON REG PROTEIN	STAPHYLOCOCCUS AUREUS	86-113								
PMETD_ECOLI	CYSTATHIONINE GAMMA-SYNTHASE	ESCHERICHIA COLI	356-383								
PMETC_ECOLI	CYSTATHIONINE BETA-LYASE	ESCHERICHIA COLI	363-390								
PMETC_SALTY	CYSTATHIONINE BETA-LYASE	SALMONELLA TYPHIMURIUM	2-29								
PMETE_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	448-482								
PMETH_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	171-198	642-676							
PMFD_ECOLI	TRANSCRIPTION-REPAIR COUPLING FACTOR	ESCHERICHIA COLI	185-212								
PMGLA_ECOLI	GALACTOSIDE-BINDING PROTEIN	ESCHERICHIA COLI	62-89	312-380							
PMINC_BACSU	SEPTUM SITE-DETERMINING PROTEIN MINC	BACILLUS SUBTILIS	65-122								
PMIOC_ECOLI	MIOC PROTEIN	ESCHERICHIA COLI	102-129								
PMIP_CHLTR	27 KD MEMBRANE PROTEIN PRECURSOR	CHLAMYDIA TRACHOMATIS	41-75								
PMIP_LEGMI	OUTER MEMBRANE PROTEIN MIP PRECURSOR	LEGIONELLA MICDADEI	106-133								
PMLS1_ENTFA	RRNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLS1_STAAU	RRNA ADENINE N-6-METHYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	9-47								
PMLS1_ENTFA	RRNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLS3_BACFR	RRNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMLS3_ECOLI	RRNA ADENINE N-6-METHYLTRANSFERASE	ESCHERICHIA COLI	4-81	120-154							
PMLS3_STRPN	RRNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS PNEUMONIAE	4-81	120-154							
PMLS3_STRSA	RRNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS SANGUIS	4-81	120-154							
PMLSC_BACFR	RRNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMMOII_METC	METHANE MONOOXYGENASE REG PROTEIN II	METHYLOCOCCUS CAPSULATUS	34-64								
PMOAB_ECOLI	MOLYBD COFAC BIOSYN PROTEIN B	ESCHERICHIA COLI	49-76								
PMOBA_THIFE	MOBA PROTEIN	THIOBACILLUS FERROOXIDANS	94-121	251-278							
PMOBC_THIFE	MOBC PROTEIN	THIOBACILLUS FERROOXIDANS	20-47								
PMOBD_THIFE	MOBD PROTEIN	THIOBACILLUS FERROOXIDANS	95-122								
PMOEA_ECOLI	MOLYBDOPTERIN BIOSYNTHESIS MOEA PROTEIN	ESCHERICHIA COLI	43-72								
PMOP1_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN 1	CLOSTRIDIUM PASTEURIANUM	243-270								
PMOP2_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN II	CLOSTRIDIUM PASTEURIANUM	26-53								
PMOXY_PARDE	METHANOL UTIL CONT PROTEIN MOXY	PARACOCCUS DENITRIFICANS	26-64								
PMPEU_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEU	SYNECHOCOCCUS SP	200-234	307-334							
PMPEV_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEV	SYNECHOCOCCUS SP	2-36	80-107	198-225						
PMPRA_ECOLI	MPRA PROTEIN	ESCHERICHIA COLI	2-31	175-216							
PMRAY_BACSU	PENTAPEPTIDE-TRANSFERASE	BACILLUS SUBTILIS	136-163								
PMREB_BACCE	ROD SHAPE-DETERMINING PROTEIN MREB	BACILLUS CEREUS	106-133	247-281							
PMREC_BACSU	ROD SHAPE-DETERMINING PROTEIN MREC	BACILLUS SUBTILIS	186-213								
PMRKB_KLEPN	CHAPERONE PROTEIN MRKB PRECURSOR	KLEBSIELLA PNEUMONIAE	65-112								
PMRKC_KLEPN	MRKC PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	198-232								
			55-82	432-489	592-622						

PCGENE	10717784	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMRKD_KLEPN	FIMBRIA ADHESIN PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	233-368								
PMRKE_KLEPN	MRKE PROTEIN	KLEBSIELLA PNEUMONIAE	193-220								
PMRP1_STRPY	FIBRINOGEN-/IG-BINDING PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	7-46	99-310							
PMRP_STRSU	MURAMIDASE-RELEASED PROTEIN PRECURSOR	STREPTOCOCCUS SUIS	25-102	130-177	261-291	431-448	507-534	588-623	773-800	1058-1085	
PMSBA_ECOLI	PROB ATP-BINDING TRANSPORT PROTEIN MSBA	ESCHERICHIA COLI	116-130	412-449							
PMSRA_STAEP	ERYTHROMYCIN RESISTANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	174-223	323-350							
PMSYD_ECOLI	ACIDIC PROTEIN MSYB	ESCHERICHIA COLI	73-100								
PMTIJ_ECOLI	MODIFICATION METHYLASE ECO31I	ESCHERICHIA COLI	230-284	474-544							
PMTAI_ACICA	MODIFICATION METHYLASE ACCI	ACINETOBACTER CALCOACETICUS	303-340								
PMTAB_SYNP2	MODIFICATION METHYLASE AQUI BETA SUBUNIT	SYNECHOCOCCUS SP	19-46								
PMTB1_BREEP	MODIFICATION METHYLASE BEPI	BREVIBACTERIUM EPIDERMIDIS	166-200	309-336							
PMTB1_HERAU	MODIFICATION METHYLASE HGIBI	HERPETOSIPHON AURANTIACUS	281-308								
PMTB2_BACAM	MODIFICATION METHYLASE BAMHII	BACILLUS AMYLOLIQUEFACIENS	33-62								
PMTB3_BACAR	MODIFICATION METHYLASE BANIII	BACILLUS ANEURINOLYTICUS	184-211								
PMTBA_BACAR	MODIFICATION METHYLASE BANI	BACILLUS ANEURINOLYTICUS	121-148	382-409							
PMTBB_BACSU	MODIFICATION METHYLASE BSUBI	BACILLUS SUBTILIS	231-258	467-496							
PMTBF_BACSU	MODIFICATION METHYLASE BSUFI	BACILLUS SUBTILIS	208-235								
PMTC1_CITFR	MODIFICATION METHYLASE CFRBI	CITROBACTER FREUNDII	2-36	55-82	252-279						
PMTC1_HERAU	MODIFICATION METHYLASE HGICI	HERPETOSIPHON AURANTIACUS	120-147								
PMTC2_HERAU	MODIFICATION METHYLASE HGICII	HERPETOSIPHON AURANTIACUS	281-311								
PMTE1_ECOLI	MODIFICATION METHYLASE ECORI	ESCHERICHIA COLI	76-110	145-172							
PMTE1_HERAU	MODIFICATION METHYLASE HGIEI	HERPETOSIPHON AURANTIACUS	281-308								
PMTE2_ECOLI	MODIFICATION METHYLASE ECORII	ESCHERICHIA COLI	4-61								
PMTE5_ECOLI	MODIFICATION METHYLASE ECO RV	ESCHERICHIA COLI	73-100								
PMTEC_ENTCL	MODIFICATION METHYLASE ECAJ	ENTEROBACTER CLOACAE	418-445								
PMTF1_FLAOK	MODIFICATION METHYLASE FOKI	FLAVOBACTERIUM OKEANOKOITES	184-211	279-306	337-366	398-425	535-646				
PMTF1_FUSNU	MODIFICATION METHYLASE FNUDI	FUSOBACTERIUM NUCLEATUM	22-49								
PMTG2_HAEGA	MODIFICATION METHYLASE HGAI-2	HAEMOPHILUS GALLINARUM	135-165								
PMTH2_HAEIN	MODIFICATION METHYLASE HINCII	HAEMOPHILUS INFLUENZAE	181-208	399-426							
PMTIJ2_METTE	MODIFICATION METHYLASE MTHZI	METHANOBACTERIUM THERMOFORMICICUM	188-215	296-323							
PMTK1_KLEPN	MODIFICATION METHYLASE KPNI	KLEBSIELLA PNEUMONIAE	270-297								
PMTLD_STRMU	MANNITOL-1-PHOSPHATE 5-DEHYDROGENASE	STREPTOCOCCUS MUTANS	39-66	224-251	349-376						
PMTM1_MORSP	MODIFICATION METHYLASE MSPI	MORAXELLA SP	5-39	49-104							
PMTN3_NEILA	MODIFICATION METHYLASE NLAIII	NEISSERIA LACTAMICA	124-158	183-210							
PMTP2_PROVU	MODIFICATION METHYLASE PVUII	PROTEUS VULGARIS	308-335								
PMTPG_SULAC	MEMBRANE-ASSOCIATED ATPASE	SULFOLOBUS ACIDOCALDARIUS	9-67								
PMTP5_PROST	MODIFICATION METHYLASE PSTI	PROVIDENCIA STUARTII	226-264								
PMTR_ECOLI	TRYPTOPHAN-SPECIFIC TRANSPORT PROTEIN	ESCHERICHIA COLI	80-107								
PMTS1_STRSA	MODIFICATION METHYLASE STSI	STREPTOCOCCUS SANGUIS	116-153	434-461	600-645						
PMTS2_SHISO	MODIFICATION METHYLASE SSOII	SHIGELLA SONNEI	81-108								
PMTS9_STAAU	MODIFICATION METHYLASE SAU96I	STAPHYLOCOCCUS AUREUS	233-274								
PMTSA_LACLC	MODIFICATION METHYLASE SCRFI-A	LACTOCOCCUS LACTIS	88-115	187-214							
PMTSB_LACLC	MODIFICATION METHYLASE SCRFI-B	LACTOCOCCUS LACTIS	27-61								
PMTSI_SPISQ	CPG DNA METHYLASE	SPIROPLASMA SP	188-230	236-290							
PMTSM_SERMA	MODIFICATION METHYLASE SMAI	SERRATIA MARCESCENS	61-88								
PMTT8_THETH	MODIFICATION METHYLASE TTHHBIII	THERMUS AQUATICUS	130-157								
PMTV1_VIBSI	MODIFICATION METHYLASE VSPI	VIBRIO SP	23-66								
PMUKD_ECOLI	MUKB PROTEIN	ESCHERICHIA COLI	370-381	1014-1048	1216-1232						
PMULI_ERWAM	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	ERWINIA AMYLOVORA	24-54								
PMULI_MORMO	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	MORGANELA MORGANII	27-54								
PMULI_PROMI	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	PROTEUS MIRABILIS	21-63								
PMURD_BACSU	UDP-LIGASE	BACILLUS SUBTILIS	101-132	299-326							
PMURE_ECOLI	LIGASE	ESCHERICHIA COLI	107-134								
PMURF_ECOLI	UDP-MURNAC-PENTAPEPTIDE SYNTHETASE	ESCHERICHIA COLI	407-437								
PMURZ_ECOLI	ENOYLPYRUVATE TRANSFERASE	ESCHERICHIA COLI	392-419								
PMURZ_ENTCL	ENOYLPYRUVATE TRANSFERASE	ENTEROBACTER CLOACAE	392-419								
PMUTA_STRCM	METHYLMALONYL-COA MUTASE BETA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	31-58								

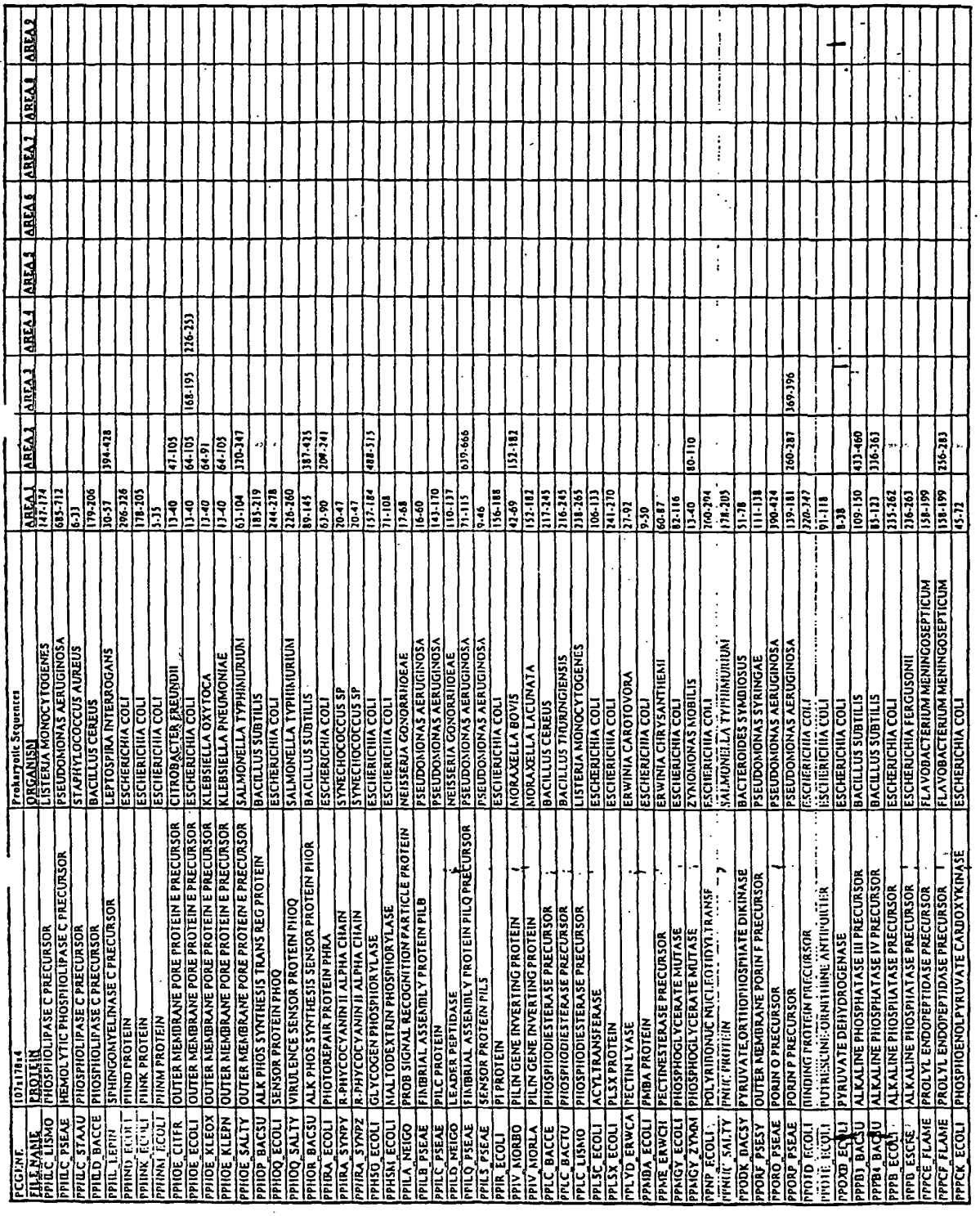
ECGENE 1013117b4		Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNUTB_PROFR	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	PROPIONIBACTERIUM FREUDENREICHII	349-376								
PNUTB_SALTY	FG-SPECIFIC ADENINE GLYCOSYLASE	SALMONELLA TYPHIMURIUM	373-300								
PNUTB_STRCM	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	481-508								
PNUTL_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTL	ESCHERICHIA COLI	80-114								
PNUTL_SALTY	DNA MISMATCH REPAIR PROTEIN MUTL	SALMONELLA TYPHIMURIUM	80-114								
PNUTL_VIBCH	PROTEIN MUTL	VIBRIO CHOLERAE	134-169								
PNUTS_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTS	ESCHERICHIA COLI	119-153								
PNUTT_STRAM	NUTT-LIKE PROTEIN	STREPTOMYCES AMBOFACIENS	60-87								
PNVAA_PSEAV	COENZYME A REDUCTASE	PSEUDOMONAS MEVALONII	341-368								
PNX_STRPY	M-RELATED PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	5-139	148-183	190-217	240-301					
PMYCO_STRCI	MYCOLYSIN PRECURSOR	STREPTOMYCES CACAOI	300-332								
PMYFC_YEREN	MYFC PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	210-237								
PNADC_SALTY	NICOTINATE-NUCLEOTIDE PYROPHOSPHORYLASE	SALMONELLA TYPHIMURIUM	123-154	155-189							
PNADR_SALTY	TRANSCRIPTIONAL REGULATOR NADR	SALMONELLA TYPHIMURIUM	233-260								
PNAGD_ECOLI	NAGD PROTEIN	ESCHERICHIA COLI	35-102								
PNAGH_CLOPE	HYALURONOGLUCOSAMINIDASE	CLOSTRIDIUM PERFRINGENS	48-75	990-1017							
PNAGR_ECOLI	NAGR PROTEIN	ESCHERICHIA COLI	119-153								
PNANH_CLOSE	SIALIDASE PRECURSOR	CLOSTRIDIUM SEPTICUM	11-42	289-330	922-988						
PNANH_CLOSO	SIALIDASE PRECURSOR	CLOSTRIDIUM SORDELLII	177-404								
PNANH_SALTY	SIALIDASE	SALMONELLA TYPHIMURIUM	290-317								
PNAPA_ENTHR	NA(+)/H(+) ANTIPORTER	ENTEROCOCCUS HIRAE	116-150								
PNARG_ECOLI	RESPIRATORY NITRATE REDUCTASE ALPHA CHAIN	ESCHERICHIA COLI	386-420								
PNARL_ECOLI	REGULATOR PROTEIN NARL	ESCHERICHIA COLI	76-103								
PNARP_ECOLI	REGULATOR PROTEIN NARP	ESCHERICHIA COLI	155-189								
PNARX_ECOLI	NITRATE/NITRITE SENSOR PROTEIN NARX	ESCHERICHIA COLI	220-247	358-385	431-458	505-538					
PNDVA_RHIME	BETA-(1-->2)GLUCAN EXPORT PROTEIN	RHIZOBIUM MELILOTI	212-239								
PNEOR_STRCY	NEOMYCIN RESISTANCE PROTEIN	STREPTOMYCES CYANOGENUS	348-375								
PNEUA_ECOLI	ACYLNEURAMINATE CYTIDYLYLTRANSFERASE	ESCHERICHIA COLI	218-253	268-298							
PNFRA_ECOLI	N4 ADSORPTION PROTEIN A PRECURSOR	ESCHERICHIA COLI	490-517								
PNFRB_ECOLI	N4 ADSORPTION PROTEIN B	ESCHERICHIA COLI	2-43	186-220	511-538						
PNFRC_ECOLI	N4 ADSORPTION PROTEIN C	ESCHERICHIA COLI	315-342								
PNFSI_ENTCL	NAD(P)H NITROREDUCTASE	ENTEROBACTER CLOACAE	9-36								
PNHAA_ECOLI	NA(+)/H(+) ANTIPORTER 1	ESCHERICHIA COLI	206-233								
PNHAB_ECOLI	NA(+)/H(+) ANTIPORTER 2	ESCHERICHIA COLI	271-305								
PNHAB_PSECL	NITRILE HYDRATASE SUBUNIT BETA	PSEUDOMONAS CHLORORAPHIS	71-101								
PNHBI_RHORI	NITRILE HYDRATASE SUBUNIT BETA	RHODOCOCCUS RHODOCHROUS	63-93								
PNIFA_AZOBR	NIF-SPECIFIC REGULATORY PROTEIN	AZOSPIRILLUM BRASILENSE	7-44								
PNIFA_BRAJA	NIF-SPECIFIC REGULATORY PROTEIN	BRADYRHIZOBIUM JAPONICUM	233-279								
PNIFA_HERSE	NIF-SPECIFIC REGULATORY PROTEIN	HERBASPIRILLUM SEROPEDICAE	9-51	162-203	327-354						
PNIFA_RHILE	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	100-127								
PNIFA_RHIME	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM MELILOTI	171-198								
PNIFA_RHOCA	NIF-SPECIFIC REGULATORY PROTEIN	RHODOBACTER CAPSULATUS	260-287								
PNIFB_AZOVI	NIFB PROTEIN	AZOTOBACTER VINELANDII	342-369								
PNIFB_KLEPN	NIFB PROTEIN	KLEBSIELLA PNEUMONIAE	134-181								
PNIFD_ANASP	NITROG MOLYBD-IRON PROTEIN	ANABAENA SP	374-401								
PNIFD_AZOBR	NITROG MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	377-404								
PNIFD_PLEBO	NITROG MOLYBD-IRON PROTEIN	PLECTONEMA BORYANUM	387-414								
PNIFD_THIFE	NITROG MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	383-410								
PNIFE_CLOPA	BIOSYNTHESIS PROTEIN NIFE	CLOSTRIDIUM PASTEURIANUM	359-386								
PNIFH_FRAAR	NITROGENASE IRON PROTEIN	FRANKIA SP	56-83								
PNIFH_PLEBO	NITROGENASE IRON PROTEIN	PLECTONEMA BORYANUM	367-394								
PNIFK_AZOBR	NITROG MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	410-437								
PNIFK_BRAJA	NITROG MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM JAPONICUM	483-510								
PNIFK_BRASP	NITROG MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM SP	478-505								
PNIFK_CLOPA	NITROG MOLYBD-IRON PROTEIN	CLOSTRIDIUM PASTEURIANUM	227-254								
PNIFK_THIFE	NITROG MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	479-506								
PNIFM_AZOCH	NIFM PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	265-292								

PCGENE	10711784	Prokaryotic Sequences	AREA1	AREA1	AREA1	AREA1	AREA3	AREA5	AREA7	AREA1	AREA2
FILENAME	PROTEIN	ORGANISM									
PNIFN_BRAJA	BIOSYNTHESIS PROTEIN NIFN	BRADYRHIZOBIUM JAPONICUM	339-366								
PNIFS_ANASP	NIFS PROTEIN	ANABAENA SP	113-139								
PNIFS_LACDE	NIFS PROTEIN HOMOLOG	LACTOBACILLUS DELBRUECKII	39-86								
PNIFT_AZOVI	NIFT PROTEIN	AZOTOBACTER VINELANDII	6-33								
PNIFU_ANASL	NIFU PROTEIN	ANABAENA SP	7-40								
PNIFU_ANASP	NIFU PROTEIN	ANABAENA SP	148-178								
PNIFU_KLEPN	NIFU PROTEIN	KLEBSIELLA PNEUMONIAE	66-93								
PNIKA_ECOLI	NICKEL TRANSPORT PROTEIN NIKA PRECURSOR	ESCHERICHIA COLI	122-149	282-309	456-483						
PNIKE_ECOLI	NICKEL TRANSPORT PROTEIN NIKE	ESCHERICHIA COLI	177-204								
PNIRB_ECOLI	NITRITE REDUCTASE	ESCHERICHIA COLI	54-81	345-372							
PNIRC_ECOLI	NIRC PROTEIN	ESCHERICHIA COLI	212-239								
PNIRS_PSEST	PSEUDOMONAS CYTOCHROME OXIDASE PRECURSO	PSEUDOMONAS STUTZERI	303-333								
PNISB_LACLA	117 KD MEMBRANE ASSOCIATED PROTEIN	LACTOCOCCUS LACTIS	202-229	287-312	661-697	886-920					
PNISC_LACLA	NISIN BIOSYNTHESIS PROTEIN NISC	LACTOCOCCUS LACTIS	53-92	140-188							
PNIST_LACLA	NISIN TRANSPORT PROTEIN NIST	LACTOCOCCUS LACTIS	223-257	278-305	426-470						
PNIVA_CLOPA	HOMOCITRATE SYNTHASE, ALPHA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	100-127	234-268							
PNIVO_CLOPA	HOMOCITRATE SYNTHASE, OMEGA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	63-94	103-132	213-240	283-310					
PNMPC_ECOLI	PORIN PROTEIN NMPC PRECURSOR	ESCHERICHIA COLI	22-49	69-96	335-362						
PNODC_BRASP	NODULATION PROTEIN C	BRADYRHIZOBIUM SP	3-30								
PNODC_RHILO	NODULATION PROTEIN C	RHIZOBIUM LOTI	286-313								
PNODC_RHILT	NODULATION PROTEIN C	RHIZOBIUM LEGUMINOSARUM	14-48								
PNODF_RHILV	NODULATION PROTEIN F	RHIZOBIUM LEGUMINOSARUM	31-58								
PNODF_RHIMS	NODULATION PROTEIN F	RHIZOBIUM MELILOTI	39-66								
PNODG_RHIME	NODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODG_RHIMS	NODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODL_RHILV	NODULATION PROTEIN L	RHIZOBIUM LEGUMINOSARUM	26-53								
PNODQ_AZOBR	NODULATION PROTEIN Q	AZOSPIRILLUM BRASILENSE	60-87								
PNODT_RHILT	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	104-134	355-382	420-454						
PNODT_RHILV	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	364-391	416-443							
PNODU_RHIFR	NODULATION PROTEIN U	RHIZOBIUM FREDII	506-536								
PNODV_BRAJA	NODULATION PROTEIN V	BRADYRHIZOBIUM JAPONICUM	378-419	739-766							
PNODX_RHILV	NODULATION PROTEIN X	RHIZOBIUM LEGUMINOSARUM	232-259								
PNOLB_RHIFR	NODULATION PROTEIN NOLB	RHIZOBIUM FREDII	133-160								
PNOLR_RHIME	NODULATION PROTEIN NOLR	RHIZOBIUM MELILOTI	88-115								
PNOSD_PSEST	NOSD PROTEIN PRECURSOR	PSEUDOMONAS STUTZERI	119-146								
PNOSR_PSEST	REGULATORY PROTEIN NOSR	PSEUDOMONAS STUTZERI	127-154								
PNOSZ_PSEAE	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS AERUGINOSA	267-294								
PNOSZ_PSEST	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS STUTZERI	339-393								
PNPRE_BACAM	BACILLOLYSIN PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	113-147	217-244							
PNPRE_BACPO	BACILLOLYSIN PRECURSOR	BACILLUS POLYMYXA	53-91	181-228							
PNPRE_BACSU	BACILLOLYSIN PRECURSOR	BACILLUS SUBTILIS	116-146	307-334							
PNQOS_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 21 KD CHAI	PARACOCCUS DENITRIFICANS	4-45								
PNQPP_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 20 KD CHAIN	PARACOCCUS DENITRIFICANS	114-152								
PNRDD_ECOLI	ANAER RIBONUC-TRIPHOS REDUCTASE	ESCHERICHIA COLI	91-125								
PNRFA_ECOLI	CYTOCHROME C552 PRECURSOR	ESCHERICHIA COLI	319-346								
PNRFG_ECOLI	NRFG PROTEIN	ESCHERICHIA COLI	72-111								
PNRLT_RHORH	ALIPHATIC NITRILASE	RHODOCOCCUS RHODOCHROUS	109-136								
PNSR_LACLA	NISIN-RESISTANCE PROTEIN	LACTOCOCCUS LACTIS	52-79	135-162							
PNTCA_ANASP	DNA-BINDING PROTEIN VF1	ANABAENA SP	63-92								
PNTCA_SYNY3	GLOBAL NITROGEN REGULATOR	SYNECHOCOCCUS SP	44-91								
PNTCA_SYNY3	GLOBAL NITROGEN REGULATOR	SYNECHOCYSTIS SP	67-94								
PNTRB_VIBAL	NITROGEN REGULATION PROTEIN NTRB	VIBRIO ALGINOLYTICUS	194-223								
PNTRC_PROVU	NITROGEN REGULATION PROTEIN NR	PROTEUS VULGARIS	385-412								
PNTRC_RHIME	NITROGEN ASSIMILATION REGULATORY PROTEIN	RHIZOBIUM MELILOTI	451-478								
PNUIC_SYNP7	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	80-107								
PNUJC_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	27-54								
PNUSC_SYNP3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	614-641								

PEGENE	10?s17?s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNUJC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	161-190								
PNUKC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	169-199								
PNULX_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	46-80								
PNUOG_ECOLI	NADH DEHYDROGENASE I CHAIN G	ESCHERICHIA COLI	168-402								
PNUOL_ECOLI	NADH DEHYDROGENASE I CHAIN L	ESCHERICHIA COLI	10-57	496-523							
PNUON_ECOLI	NADH DEHYDROGENASE I CHAIN N	ESCHERICHIA COLI	392-419								
PNUPC_ECOLI	NUCLEOTIDE PERMEASE	ESCHERICHIA COLI	113-43	134-164	136-333						
PNUSA_ECOLI	NUSA PROTEIN	ESCHERICHIA COLI	21-62								
PNUSB_ECOLI	N UTILIZATION SUBSTANCE PROTEIN B	ESCHERICHIA COLI	17-65	70-97							
PNUSG_ECOLI	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	ESCHERICHIA COLI	141-168								
PNUSG_THEMA	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	THERMOTOGA MARITIMA	203-230								
PNYLB_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250								
PNYLC_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250								
PO1AG_BACCE	OLIGO-1,6-GLUCOSIDASE	BACILLUS CEREUS	301-328								
POCCT_AGR16	OCTOPINE-BINDING PROTEIN T PRECURSOR	AGROBACTERIUM TUMEFACIENS	172-202								
PODO1_AZOVI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	AZOTOBACTER VINELANDII	829-856								
PODO1_BACSU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	BACILLUS SUBTILIS	487-524	809-830							
PODO1_ECOLI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	ESCHERICHIA COLI	6-33								
PODO1_BACSU	DIHYDROLIPOAMIDE SUC-TRANSF COMP	BACILLUS SUBTILIS	10-60								
PODO8_PSEPU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	PSEUDOMONAS PUTIDA	223-254								
PODP1_ECOLI	PYRUVATE DEHYDROGENASE E1 COMPONENT	ESCHERICHIA COLI	624-651								
PODP2_AZOVI	DIHYDROLIPOAMIDE ACETRANS COMP	AZOTOBACTER VINELANDII	518-545								
PODP2_ECOLI	DIHYDROLIPOAMIDE ACETRANS COMP	ESCHERICHIA COLI	144-1	117-144							
PODPA_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	299-333								
PODPA_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	305-332								
PODPB_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	33-50								
PODPB_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	16-50								
PONIE_CHLTR	13 KD CYSTEINE-RICH PROTEIN, SEROVAR E	CHLAMYDIA TRACHOMATIS	18-65								
PONA1_NEIGO	OUTER MEMBRANE PROTEIN P1A PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
PONA1_NEIME	OUTER MEMBRANE PROTEIN P1A PRECURSOR	NEISSERIA MENINGITIDIS	359-386								
PONA2_NEIME	OUTER MEMBRANE PROTEIN P1A PRECURSOR	NEISSERIA MENINGITIDIS	353-380								
PONB1_NEIGO	OUTER MEMBRANE PROTEIN P1B PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
PONB1_NEIME	OUTER MEMBRANE PROTEIN P1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
PONB3_NEIGO	OUTER MEMBRANE PROTEIN P.1B PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
PONB3_NEIME	OUTER MEMBRANE PROTEIN P.1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
PONB3_NEIME	OUTER MEMBRANE PROTEIN P.1B PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
PONB4_NEIME	OUTER MEMBRANE PROTEIN P.1B PRECURSOR	NEISSERIA MENINGITIDIS	24-51	63-90							
PONB_NEILA	OUTER MEMBRANE PROTEIN P.1B PRECURSOR	NEISSERIA LACTAMICA	116-143								
PONB_NEISI	OUTER MEMBRANE PROTEIN P.1B PRECURSOR	NEISSERIA SICCA	24-51	63-90							
PONLA_ACTPL	OUTER MEMBRANE LIPOPROTEIN PRECURSOR	ACTINOBACILLUS PLEUROPNEUMONIAE	114-151								
PONP1_HAEIN	OUTER MEMBRANE PROTEIN P1 PRECURSOR	HAEMOPHILUS INFLUENZAE	154-184	303-330	341-368						
PONP2_HAEIN	OUTER MEMBRANE PROTEIN P2 PRECURSOR	HAEMOPHILUS INFLUENZAE	16-71	220-254	326-353						
PONP3_NEIGO	OUTER MEMBRANE PROTEIN P.III PRECURSOR	NEISSERIA GONORRHOEAE	14-41								
PONP7_STAAU	70 KD OUTER MEMBRANE PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	53-80	88-115							
PONPA_THEMA	OUTER MEMBRANE PROTEIN ALPHA PRECURSOR	THERMOTOGA MARITIMA	100-138	151-178	183-249	255-292	301-328	331-385			
PONPC_ECOLI	OUTER MEMBRANE PROTEIN C PRECURSOR	ESCHERICHIA COLI	20-47	64-94							
PONPC_NEIGO	OUTER MEMBRANE PROTEIN P.IIC PRECURSOR	NEISSERIA GONORRHOEAE	89-123								
PONPC_SALTI	OUTER MEMBRANE PROTEIN C PRECURSOR	SALMONELLA TYPHI	166-193								
PONPF_ECOLI	OUTER MEMBRANE PROTEIN F PRECURSOR	ESCHERICHIA COLI	21-55	231-258							
PONPH_PHI39	OMPH PROTEIN	PHOTOBACTERIUM SP	293-319								
PONPT_ECOLI	PROTEASE VII PRECURSOR	ESCHERICHIA COLI	37-64								
POP65_NEIGO	OPACITY PROTEIN OPA65	NEISSERIA GONORRHOEAE	71-111								
POP67_NEIGO	OPACITY PROTEIN OPA67	NEISSERIA GONORRHOEAE	72-109								
POPAA_NEIGO	OPACITY PROTEIN OPA33	NEISSERIA GONORRHOEAE	71-123	140-167							
POPAG_NEIGO	OPACITY PROTEIN OPA32	NEISSERIA GONORRHOEAE	80-107	140-167							
POPAJ_NEIGO	OPACITY PROTEIN OPA34	NEISSERIA GONORRHOEAE	80-107								
POPAJ_NEIGO	OPACITY PROTEIN OPA38	NEISSERIA GONORRHOEAE	71-105								

PCGENE	1071178s4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
POPAK_NEIGO	OPACITY PROTEIN OPA37	NEISSERIA GONORRHOEAE	71-103								
POPDA_ECOLI	OLIGOPEPTIDASE A	ESCHERICHIA COLI	147-174								
POPDA_SALTY	OLIGOPEPTIDASE A	SALMONELLA TYPHIMURIUM	147-174								
POPDE_PSEAE	TRANSCRUPTION FACTOR OPDE	PSEUDOMONAS AERUGINOSA	64-91								
POPPA_ECOLI	OLIGOPEPTIDE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	402-432								
POPPB_SALTY	OLIGOPEPTIDE PERMEASE PROTEIN OPPB	SALMONELLA TYPHIMURIUM	265-299								
POPR1_NEIME	OPACITY-RELATED PROTEIN POPM1	NEISSERIA MENINGITIDIS	108-135								
POPR1_NEIME	OPACITY-RELATED PROTEIN POPM3	NEISSERIA MENINGITIDIS	94-135								
POSMC_ECOLI	OSMOTICALLY INDUCIBLE PROTEIN OSMC	ESCHERICHIA COLI	5-32								
POSPA_BORBU	OUTER SURFACE PROTEIN A PRECURSOR	BORRELIA BURGDORFERI	63-100	112-139	157-204	223-271					
POSPB_BORBU	OUTER SURFACE PROTEIN B PRECURSOR	BORRELIA BURGDORFERI	113-239	262-296							
POTC1_BACSU	ORNITHINE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	188-215								
POTCC_PSEAE	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	17-44								
POTCC_PSEPU	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS PUTIDA	3-33								
POUTB_BACSU	SPORE OUTGROWTH FACTOR B	BACILLUS SUBTILIS	225-252								
POUTO_ERWCA	LEADER PEPTIDASE	ERWINIA CAROTOVORA	189-216								
PP18K_STRPA	18 KD PROTEIN IN FIMA 3'REGION	STREPTOCOCCUS PARASANGUIS	115-149								
PP18K_STRSA	18 KD PROTEIN IN SSAB 3'REGION	STREPTOCOCCUS SANGUIS	10-37	114-148							
PP1P_LACLC	21-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-930	1073-1100	1223-1250	1446-1496	1625-1655			
PP29_MYCGR	PROTEIN P29	MYCOPLASMA HYORHINIS	5-56	101-160	202-246						
PP2P_LACLA	PII-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-930	1073-1100	1223-1250	1446-1496	1623-1689			
PP2P_LACPA	PII-TYPE PROTEINASE PRECURSOR	LACTOBACILLUS PARACASEI	107-155	904-941	1073-1100	1223-1250	1446-1496	1628-1655			
PP30_ECOLI	P30 PROTEIN	ESCHERICHIA COLI	55-82								
PP34_RICRI	PROTEIN P34	RICKETTSIA RICKETTSII	9-47	135-173							
PP37_MYCHR	PROTEIN P37 PRECURSOR	MYCOPLASMA HYORHINIS	38-75								
PP3P_LACLC	PII-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-930	1073-1100	1223-1250	1446-1496	1628-1655			
PP41K_PSECL	41 KD PROTEIN	PSEUDOMONAS CHLORORAPHIS	288-315								
PP54_ENTFC	P54 PROTEIN PRECURSOR	ENTEROCOCCUS FAECIUM	58-92	141-209							
PP60_LISGR	PROTEIN P60 PRECURSOR	LISTERIA GRAYI	31-61	101-142	300-334	431-458					
PP60_LISIN	PROTEIN P60 PRECURSOR	LISTERIA INNOCUA	67-94	102-143							
PP60_LISIV	PROTEIN P60 PRECURSOR	LISTERIA IVANOVII	101-140	315-359							
PP60_LISMO	PROTEIN P60 PRECURSOR	LISTERIA MONOCYTOGENES	103-144								
PP60_LISSE	PROTEIN P60 PRECURSOR	LISTERIA SEELIGERI	101-140	270-298	321-365	395-422					
PP60_LISWE	PROTEIN P60 PRECURSOR	LISTERIA WELSHIMERI	113-140	317-361	396-423						
PP69_MYCHR	PROTEIN P69	MYCOPLASMA HYORHINIS	264-295	421-464	487-517	544-575					
PPABA_BACSU	ADC SYNTHASE	BACILLUS SUBTILIS	12-41								
PPABC_BACSU	4-AMINO-4-DEOXYCHORISMATE LYASE	BACILLUS SUBTILIS	230-277								
PPABC_ECOLI	4-AMINO-4-DEOXYCHORISMATE LYASE	ESCHERICHIA COLI	140-167								
PPABL_STRGR	PROTEIN Y	STREPTOMYCES GRISEUS	52-79								
PPAC_ARTVI	PENICILLIN ACYLASE PRECURSOR	ARTHROBACTER VISCOSUS	170-197	333-363	571-606	640-674					
PPAC_BACSH	PENICILLIN ACYLASE	BACILLUS SPHAERICUS	233-259								
PPAC_STRMU	PAC PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	146-176	281-465	538-565	576-630	1075-1102	1159-1186	1381-1434		
PPAI1_BACSU	REGULATORY PROTEIN PAI 1	BACILLUS SUBTILIS	103-137								
PPAI2_BACSU	REGULATORY PROTEIN PAI 2	BACILLUS SUBTILIS	145-172								
PPAPE_ECOLI	FIMBRIAL PROTEIN PAPE	ESCHERICHIA COLI	42-69	86-123							
PPAPF_ECOLI	MINOR FIMBRIAL PROTEIN PAPF	ESCHERICHIA COLI	4-31								
PPAPG_ECOLI	FIMBRIAL PROTEIN PAPG PRECURSOR	ESCHERICHIA COLI	282-316								
PPARA_AGRTU	PARA PROTEIN	AGROBACTERIUM TUMEFACIENS	60-87								
PPAUB_ECOLI	PLASMID PARTITION PAR B PROTEIN	ESCHERICHIA COLI	117-134	249-283							
PPARE_ECOLI	TOPOISOMERASE IV SUBUNIT B	ESCHERICHIA COLI	444-471	526-553							
PPARE_SALTY	TOPOISOMERASE IV SUBUNIT B	SALMONELLA TYPHIMURIUM	444-471	526-553							
PPA_BACAN	PROTECTIVE ANTIGEN PRECURSOR	BACILLUS ANTHRACIS	113-52	1125-152	296-335	585-615	650-684				
PPBP1_ECOLI	PENICILLIN-BINDING PROTEIN 1	ESCHERICHIA COLI	95-122	178-205	207-241						
PPBP2_NEIGO	PENICILLIN-BINDING PROTEIN 2	NEISSERIA GONORRHOEAE	193-220								
PPBP2_NEIME	PENICILLIN-BINDING PROTEIN 2	NEISSERIA MENINGITIDIS	193-220								
PPBP2_STRPN	PENICILLIN-BINDING PROTEIN 2B	STREPTOCOCCUS PNEUMONIAE	144-183	216-243	259-286	605-632					
PPBP3_ECOLI	PENICILLIN-BINDING PROTEIN 3 PRECURSOR	ESCHERICHIA COLI	224-251	334-368							

PCGENE	107s178s4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	ORGANISM								
PPBP4_BACSU	PENICILLIN-BINDING PROTEIN 4*	BACILLUS SUBTILIS	374-401							
PPBP4_ECOLI	PENICILLIN-BINDING PROTEIN 4 PRECURSOR	ESCHERICHIA COLI	336-363							
PPBPA_ECOLI	PENICILLIN-BINDING PROTEIN 1A	ESCHERICHIA COLI	145-172							
PPBPB_ECOLI	PENICILLIN-BINDING PROTEIN 1B	ESCHERICHIA COLI	62-96	263-290						
PPBPX_STRPN	PENICILLIN-BINDING PROTEIN 2X	STREPTOCOCCUS PNEUMONIAE	89-116	706-733						
PPBP_STAAU	PENICILLIN-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	78-108	176-203	263-324	502-529				
PPCAB_PSEFU	CYCLOISOMERASE	PSEUDOMONAS PUTIDA	115-142	226-253						
PPELI_ERWCA	PECTATE LYASE III PRECURSOR	ERWINIA CAROTOVORA	110-137							
PPELA_ERWCA	PECTATE LYASE A PRECURSOR	ERWINIA CAROTOVORA	110-137							
PPELB_ERWCA	PECTATE LYASE B PRECURSOR	ERWINIA CAROTOVORA	110-137							
PPELC_ERWCA	PECTATE LYASE C PRECURSOR	ERWINIA CAROTOVORA	110-137							
PPELE_ERWCH	PECTATE LYASE E PRECURSOR	ERWINIA CHRYSANTHEMI	40-67	209-240						
PPELP_ERWCA	PERIPLASMIC PECTATE LYASE PRECURSOR	ERWINIA CAROTOVORA	455-482							
PPELP_YERPS	PERIPLASMIC PECTATE LYASE PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	459-489							
PPELX_ERWCA	PUTATIVE PECTATE LYASE X PRECURSOR	ERWINIA CAROTOVORA	188-218							
PPELX_ERWCH	EXOPOLYGALACTURONATE LYASE PRECURSOR	ERWINIA CHRYSANTHEMI	466-493							
PPEPD_ECOLI	AMINOACYL-HISTIDINE DIPEPTIDASE	ESCHERICHIA COLI	264-314							
PPEPQ_ECOLI	X-PRO DIPEPTIDASE	ESCHERICHIA COLI	251-278							
PPERT_BORBR	PERTACTIN PRECURSOR	BORDETELLA BRONCHISEPTICA	617-644							
PPERT_BORPA	PERTACTIN PRECURSOR	BORDETELLA PARAPERTUSSIS	628-655							
PPERT_BORPE	PERTACTIN PRECURSOR	BORDETELLA PERTUSSIS	616-643							
PPGK_CORGL	PHOSPHOGLYCERATE KINASE	CORYNEBACTERIUM GLUTAMICUM	83-117							
PPGK_ECOLI	PHOSPHOGLYCERATE KINASE	ESCHERICHIA COLI	186-216							
PPGK_METBR	PHOSPHOGLYCERATE KINASE	METHANOBACTERIUM BRYANTII	136-63							
PPGK_THETH	PHOSPHOGLYCERATE KINASE	THERMUS AQUATICUS	222-249							
PPGL1_ERWCA	ENDO-POLYGALACTURONASE PRECURSOR	ERWINIA CAROTOVORA	237-271							
PPGTE_SALTY	OUTER MEMBRANE PROTEASE E PRECURSOR	SALMONELLA TYPHIMURIUM	66-93							
PPHA1_FREDI	C-PHYCOCYANIN-1 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48							
PPHA2_FREDI	C-PHYCOCYANIN-2 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48							
PPHAA_PSEOL	POLY(3-HYDROXYALKANOATE) POLYMERASE 1	PSEUDOMONAS OLEOVORANS	264-291							
PPHAB_ANACY	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA CYLINDRICA	7-48							
PPHAB_ANAVA	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA VARIABILIS	14-48							
PPHAB_FREDI	ALLOPHYCOCYANIN BETA CHAIN	FREMYELLA DIPLOSIPHON	8-49							
PPHAB_MASLA	ALLOPHYCOCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	14-41							
PPHAB_SYNP6	ALLOPHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	14-41							
PPHAC_SYNP6	ALLOPHYCOCYANIN ALPHA-B CHAIN	SYNECHOCOCCUS SP	33-60							
PPHAG_FREDI	ALLOPHYCOCYANIN GAMMA CHAIN	FREMYELLA DIPLOSIPHON	32-59							
PPHB1_FREDI	C-PHYCOCYANIN-1 BETA CHAIN	FREMYELLA DIPLOSIPHON	29-56							
PPHBD_ALCEU	ACETOACETYL-COA REDUCTASE	ALCALIGENES EUTROPHUS	155-83							
PPHCA_SYNY3	C-PHYCOCYANIN ALPHA CHAIN	SYNECHOCYSTIS SP	21-55							
PPHCB_SYNP6	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55							
PPHCB_SYNP7	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55							
PPHCB_SYNY3	C-PHYCOCYANIN BETA CHAIN	SYNECHOCYSTIS SP	21-55							
PPHEA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	10-37							
PPHEA_ERWHE	CHORISMATE MUTASE	ERWINIA HERBICOLA	110-137	159-186	232-286					
PPHEA_PSESP	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS SP	171-201	287-314	437-464					
PPHEB_MASLA	PHYCOERYTHROCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	21-62							
PPHEB_PSESP	CATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS SP	24-51							
PPHEG_SYNPY	LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	158-185							
PPHEP_ECOLI	PHENYLALANINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	284-311							
PPHF1_CLOPA	PERIPLASMIC [FE] HYDROGENASE 1	CLOSTRIDIUM PASTEURIANUM	434-471							
PPHL1_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36							
PPHL2_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36							
PPHLC_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	32-59	179-206						
PPHLC_CLOBI	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM BIFERMENTANS	50-77	333-365						
PPHLC_CLOPE	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM PERFRINGENS	210-237	369-398						



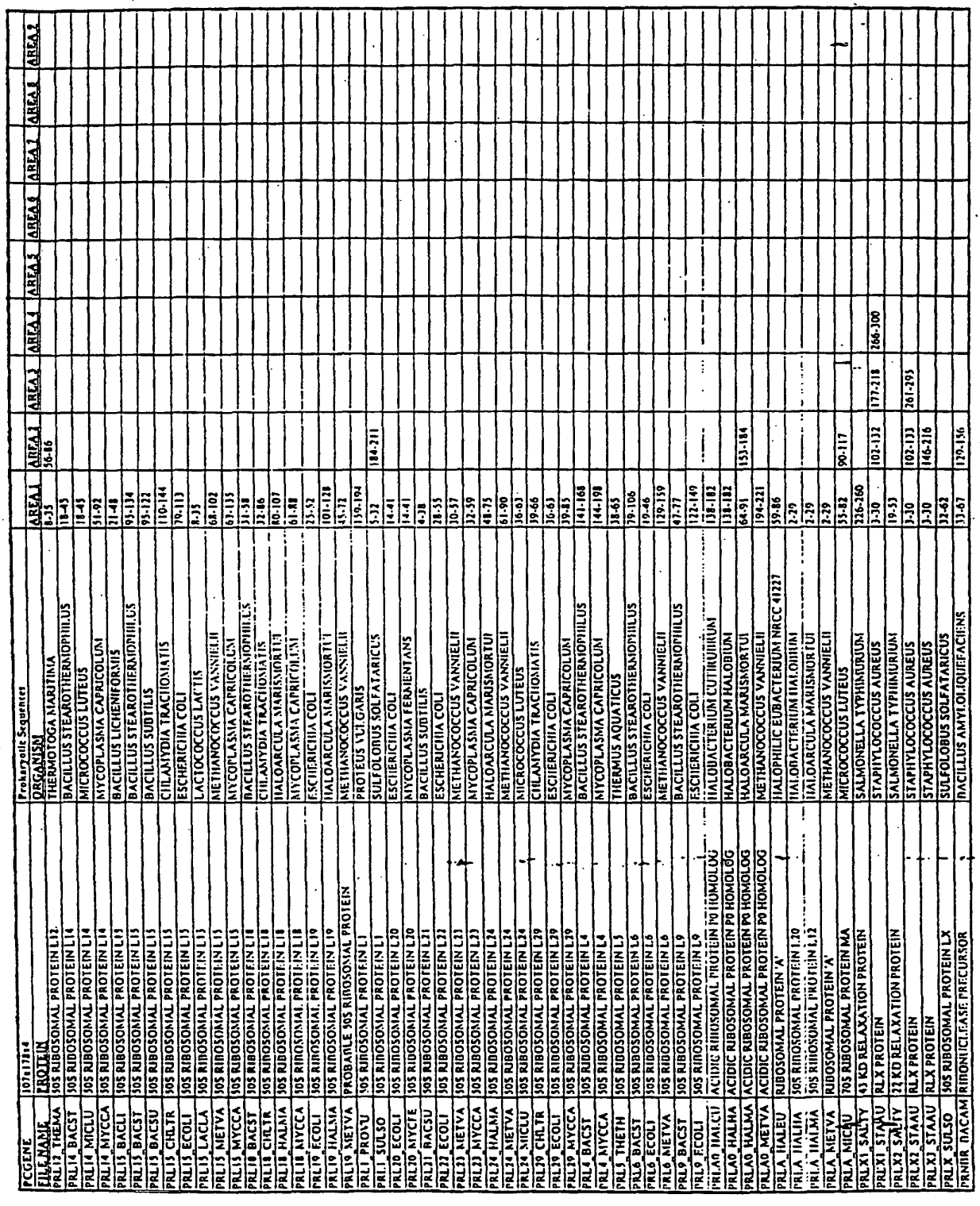
PECGENE	10711784	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPILC_LISMO	PHOSPHOLIPASE C PRECURSOR	LISTERIA MONOCYTOGENES	147-174								
PPILC_PSEAE	HEMOLYTIC PHOSPHOLIPASE C PRECURSOR	PSEUDOMONAS AERUGINOSA	685-712								
PPILC_STAAU	PHOSPHOLIPASE C PRECURSOR	STAPHYLOCOCCUS AUREUS	6-33								
PPILD_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	179-206								
PPIL_LEPIN	SPHINGOMYELINASE C PRECURSOR	LEPTOSPIRA INTERROGANS	30-57	394-428							
PPIND_ECOLI	PIND PROTEIN	ESCHERICHIA COLI	206-226								
PPINK_ECOLI	PINK PROTEIN	ESCHERICHIA COLI	178-205								
PPINM_ECOLI	PINM PROTEIN	ESCHERICHIA COLI	5-33								
PPIOE_CITFR	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	CITROBACTER FREUNDII	13-40	47-105							
PPIOE_ECOLI	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	ESCHERICHIA COLI	13-40	64-105	168-195	226-253					
PPIOE_KLEOX	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA OXYTOCA	13-40	64-91							
PPIOE_KLEPN	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA PNEUMONIAE	13-40	64-105							
PPIOE_SALTY	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	SALMONELLA TYPHIMURIUM	63-104	320-347							
PPIOP_BACSU	ALK PHOS SYNTHESIS TRANS REG PROTEIN	BACILLUS SUBTILIS	185-219								
PPIOQ_ECOLI	SENSOR PROTEIN PHOQ	ESCHERICHIA COLI	244-278								
PPIOQ_SALTY	VIRULENCE SENSOR PROTEIN PHOQ	SALMONELLA TYPHIMURIUM	226-260								
PPIOR_BACSU	ALK PHOS SYNTHESIS SENSOR PROTEIN PHOR	BACILLUS SUBTILIS	89-145	387-423							
PPIPA_ECOLI	PHOTOREPAIR PROTEIN PHRA	ESCHERICHIA COLI	63-90	209-241							
PPIPA_SYNPY	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPIPA_SYNPZ	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPIPH5U_ECOLI	GLYCOGEN PHOSPHORYLASE	ESCHERICHIA COLI	137-184	488-515							
PPIPH5H_ECOLI	MALTODEXTRIN PHOSPHORYLASE	ESCHERICHIA COLI	71-108								
PPILA_NEIGO	PROB SIGNAL RECOGNITION PARTICLE PROTEIN	NEISSERIA GONORRHOEAE	17-68								
PPILB_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILB	PSEUDOMONAS AERUGINOSA	16-60								
PPILC_PSEAE	PILC PROTEIN	PSEUDOMONAS AERUGINOSA	143-170								
PPILD_NEIGO	LEADER PEPTIDASE	NEISSERIA GONORRHOEAE	110-137								
PPILQ_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILQ PRECURSOR	PSEUDOMONAS AERUGINOSA	71-115	639-666							
PPILS_PSEAE	SENSOR PROTEIN PILS	PSEUDOMONAS AERUGINOSA	9-46								
PPIR_ECOLI	PI PROTEIN	ESCHERICHIA COLI	156-188								
PPIV_MORBO	PILIN GENE INVERTING PROTEIN	MORAXELLA BOVIS	42-69	152-182							
PPIV_MORLA	PILIN GENE INVERTING PROTEIN	MORAXELLA LACUNATA	155-182								
PPLC_BACCE	PHOSPHODIESTERASE PRECURSOR	BACILLUS CEREUS	217-245								
PPLC_BACTU	PHOSPHODIESTERASE PRECURSOR	BACILLUS THURINGIENSIS	216-245								
PPLC_LISMO	PHOSPHODIESTERASE PRECURSOR	LISTERIA MONOCYTOGENES	238-265								
PPLSC_ECOLI	ACYLTRANSFERASE	ESCHERICHIA COLI	106-133								
PPLSX_ECOLI	PLSX PROTEIN	ESCHERICHIA COLI	241-270								
PPLYD_ERWCA	PECTIN LYASE	ERWINIA CAROTOVORA	27-92								
PPMBA_ECOLI	PMBA PROTEIN	ESCHERICHIA COLI	9-50								
PPME_ERWCH	PECTINESTERASE PRECURSOR	ERWINIA CHRYSANTHEMI	60-87								
PPMGY_ECOLI	PHOSPHOGLYCERATE MUTASE	ESCHERICHIA COLI	82-116								
PPMGY_ZYMMO	PHOSPHOGLYCERATE MUTASE	ZYMOMONAS MOBILIS	13-40	80-110							
PPNP_ECOLI	POLYRIBONUC NUCLEOTIDYLTRANSF	ESCHERICHIA COLI	260-294								
PPNUC_SALTY	PNUC PROTEIN	SALMONELLA TYPHIMURIUM	178-205								
PPODK_DACSY	PYRUVATE,ORTHOPHOSPHATE DIKINASE	BACTEROIDES SYMBIOSUS	51-78								
PPORF_PSESY	OUTER MEMBRANE PORIN F PRECURSOR	PSEUDOMONAS SYRINGAE	111-138								
PPORO_PSEAE	PORIN O PRECURSOR	PSEUDOMONAS AERUGINOSA	390-424								
PPORP_PSEAE	PORIN P PRECURSOR	PSEUDOMONAS AERUGINOSA	139-181	260-287	369-396						
PPOTD_ECOLI	BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	220-247								
PPOTE_ECOLI	PUTRESCINE-ORNITHINE ANTIPORTER	ESCHERICHIA COLI	91-118								
PPOXD_ECOLI	PYRUVATE DEHYDROGENASE	ESCHERICHIA COLI	9-38								
PPPB3_BACSU	ALKALINE PHOSPHATASE III PRECURSOR	BACILLUS SUBTILIS	109-150	433-460							
PPPB4_BACSU	ALKALINE PHOSPHATASE IV PRECURSOR	BACILLUS SUBTILIS	83-123	336-363							
PPPB_ECOLI	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA COLI	235-262								
PPPD_ESCRI	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA FERGUSONII	236-263								
PPPCE_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199								
PPPCF_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199	256-283							
PPPCK_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYKINASE	ESCHERICHIA COLI	45-72								

PCGENE	10feb18s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPRDA_CLOPE	PROTEIN A PRECURSOR	CLOSTRIDIUM PERFRINGENS	73-107								
PPP5A_ECOLI	PHOSPHOENOLPYRUVATE SYNTHASE	ESCHERICHIA COLI	49-76								
PPOQ2_ACICA	COENZYME PQQ SYNTHESIS PROTEIN II	ACINETOBACTER CALCOACETICUS	40-74								
PPRCA_ANAVA	CALCIUM DEPENDENT PROTEASE PRECURSOR	ANABAENA VARIABILIS	171-398								
PPRCA_THEAC	PROTEASOME, ALPHA SUBUNIT	THERMOPLASMA ACIDOPHILUM	88-115								
PPRC_ECOLI	TAIL-SPECIFIC PROTEASE PRECURSOR	ESCHERICHIA COLI	158-192	366-393							
PPRE1_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	127-78	152-179	264-347						
PPRE2_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	48-75	181-208	310-361	366-393					
PPREA_LACPL	PLASMID RECOMBINATION ENZYME	LACTOBACILLUS PLANTARUM	137-71	291-318							
PPRE_BACLI	REGULATORY PROTEIN	BACILLUS LICHENIFORMIS	2-40								
PPRE_BACSP	PLASMID RECOMBINATION ENZYME	BACILLUS SP	181-224	288-345							
PPRE_STRAG	PLASMID RECOMBINATION ENZYME	STREPTOCOCCUS AGALACTIAE	285-319	332-359	420-454						
PPRFA_LISMO	LISTERIOLYSIN REGULATORY PROTEIN	LISTERIA MONOCYTOGENES	76-110	172-204							
PPRIA_ECOLI	PRIMOSOMAL PROTEIN N'	ESCHERICHIA COLI	218-245								
PPRIM_BACSU	DNA PRIMASE	BACILLUS SUBTILIS	383-403								
PPRIM_BUCAP	DNA PRIMASE	BUCHNERA APHIDICOLA	13-43	282-309							
PPRIM_CLOAB	DNA PRIMASE	CLOSTRIDIUM ACETOBUTYLICUM	87-114								
PPRIM_LACLA	DNA PRIMASE	LACTOCOCCUS LACTIS	269-296								
PPRIN_RICPR	DNA PRIMASE	RICKETTSIA PROWAZEKII	10-37	245-286	477-504	526-593					
PPRIS_DESDE	PRISMANE PROTEIN	DESULFOVIBRIO DESULFURICANS	30-57								
PPRLB_ACHLY	BETA-LYTIC METALLOENDOPEPTIDASE	ACHROMOBACTER LYTICUS	317-344								
PPRLB_LYSEN	BETA-LYTIC METALLOENDOPEPTIDASE	LYSOBACTER ENZYMOGENES	121-148								
PPRO1_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145	275-316							
PPRO2_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145								
PPROA_SERMA	GAMMA-GLUTAMYL PHOSPHATE REDUCTASE	SERRATIA MARCESCENS	309-336								
PPROA_STAAU	PROTEIN A PRECURSOR	STAPHYLOCOCCUS AUREUS	2-29								
PPROB_SERMA	GLUTAMATE 5-KINASE	SERRATIA MARCESCENS	7-34								
PPROB_STRAG	PROTEIN B	STREPTOCOCCUS AGALACTIAE	58-85								
PPROC_PSEAE	PYRROLINE-5-CARBOXYLATE REDUCTASE	PSEUDOMONAS AERUGINOSA	148-175								
PPROH_BACSU	PYRROLINE-5-CARBOXYLATE REDUCTASE HOMOL	BACILLUS SUBTILIS	200-227								
PPROP_ECOLI	PROLINE/BETAINE TRANSPORTER	ESCHERICHIA COLI	460-487								
PPROV_ECOLI	PERIPHERAL MEMBRANE PROTEIN PROV	ESCHERICHIA COLI	24-54								
PPROV_SALTY	PERIPHERAL MEMBRANE PROTEIN PROV	SALMONELLA TYPHIMURIUM	24-54								
PPRRB_ECOLI	PRRB PROTEIN	ESCHERICHIA COLI	170-197								
PPRRC_ECOLI	ANTICODON NUCLEASE	ESCHERICHIA COLI	282-309								
PPRRD_ECOLI	PRRD PROTEIN	ESCHERICHIA COLI	278-305								
PPRSA_BACSU	PROTEIN EXPORT PROTEIN PRSA PRECURSOR	BACILLUS SUBTILIS	52-87	95-157							
PPRTA_STRGR	PROTEASE A PRECURSOR	STREPTOMYCES GRISEUS	56-110								
PPRTC_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	103-130								
PPRTC_PORGI	COLLAGENASE PRECURSOR	PORPHYROMONAS GINGIVALIS	285-312								
PPRTD_ERWCH	PROTEASES SECRETION PROTEIN PRTD	ERWINIA CHRYSANTHEMI	328-355								
PPRTE_BACNO	EXTRACELLULAR SERINE PROTEASE PRECURSOR	BACTEROIDES NODOSUS	106-133	210-265	346-384						
PPRTE_ERWCH	PROTEASES SECRETION PROTEIN PRTE	ERWINIA CHRYSANTHEMI	108-135	158-192	231-290						
PPRTF_ERWCH	PROTEASES SECRETION PROTEIN PRTF	ERWINIA CHRYSANTHEMI	280-310								
PPRTM_LACLA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	76-103	112-139							
PPRTM_LACLC	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	26-53	76-103	112-139						
PPRTM_LACPA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOBACILLUS PARACASEI	76-103	112-139							
PPRTS_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	104-131	576-607	1007-1041						
PPRTT_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	464-491	1007-1041						
PPRTX_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	314-341								
PPSAA_SYNEN	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS ELONGATUS NAEGEL	120-147								
PPSAA_SYNP2	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS SP	109-136	326-356							
PPSAA_SYNVU	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS VULCANUS	120-147								
PPSAA_SYNY3	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCYSTIS SP	44-71	120-147	338-368						
PPSAB_WHEAT	CHLOROPLAST PROTEIN PSAB PRECURSOR	TRITICUM AESTIVUM	244-271								
PPSAD_SYNP6	PHOTOSYSTEM I REACTION CENTRE SUBUNIT II	SYNECHOCOCCUS SP	11-38								
PPSAE_YERPE	PSAE PROTEIN PRECURSOR	YERSINIA PESTIS	66-118								

PCGENE	10767864	Prokaryotic Sequences	AREA1	AREA1	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10	AREA11	AREA12
EILE_HAHE	PROTEIN	ORGANISM	99-126	209-243										
PP3B0_ANAN	STABILIZING POLYPEPTIDE PRECURSOR	ANACYSTIS NIDULANS	55-82											
PP3PA_ECOLI	PHAGE SHOCK PROTEIN A	ESCHERICHIA COLI	114-141											
PP5RA_WOLSU	POLYSULFIDE REDUCTASE CHAIN A PRECURSOR	WOLINELLA SUCCINOGENES	40-74											
PP5T5_ECOLI	PHOSPHATE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	26-60											
PP11_BACSU	PHOSPHOTRANSFERASE	BACILLUS SUBTILIS	135-162	399-426										
PP11_ECOLI	PHOSPHOTRANSFERASE	ESCHERICHIA COLI	132-159	399-426										
PP1I_SALTY	PHOSPHOTRANSFERASE	SALMONELLA TYPHIMURIUM	34-61											
PP1I_STACA	PHOSPHOTRANSFERASE	STAPHYLOCOCCUS CARNOSUS	34-61	198-233										
PP1I_STRSL	PHOSPHOTRANSFERASE	STREPTOCOCCUS SALIVARIUS	34-61											
PP1B_ERWCH	PHOSPHOTRANSFERASE ENZYME II	ERWINIA CHRYSANTHEMI	127-154											
PP1G_BACSU	PHOSPHOTRANSFERASE ENZYME II	BACILLUS SUBTILIS	670-697											
PP1L_LACCA	PHOSPHOTRANSFERASE ENZYME II	LACTOBACILLUS CASEI	537-564											
PP1L_LACLA	PHOSPHOTRANSFERASE ENZYME II	LACTOCOCCUS LACTIS	183-214	409-436										
PP1L_STAAU	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS AUREUS	421-448	530-557										
PP1N_ECOLI	PHOSPHOTRANSFERASE ENZYME II	ESCHERICHIA COLI	445-489											
PP1N_STACA	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS CARNOSUS	388-415											
PP1N_ECOLI	N-ACETYLGLUCOSAMINE-PERMEASE	ESCHERICHIA COLI	370-400											
PP1S_STRMU	PHOSPHOTRANSFERASE ENZYME II	STREPTOCOCCUS MUTANS	600-627											
PP1F_SALTY	PHOSPHOTRANSFERASE FPR PROTEIN	SALMONELLA TYPHIMURIUM	107-134											
PP1L_LACCA	PHOSPHOTRANSFERASE FACTOR III	LACTOBACILLUS CASEI	40-67											
PP1IIP_ECOLI	PHOSPHOCARRIER PROTEIN IIPR	ESCHERICHIA COLI &	31-65											
		SALMONELLA TYPHIMURIUM												
PPTHP_KLEPN	PHOSPHOCARRIER PROTEIN HPR	KLEBSIELLA PNEUMONIAE	31-65											
PPTRB_ECOLI	PROTEASE II	ESCHERICHIA COLI	94-121	217-231										
PPULA_KLEAE	PULLULANASE	KLEBSIELLA AEROGENES	894-928											
PPULA_KLEPN	PULLULANASE	KLEBSIELLA PNEUMONIAE	894-918											
PPULO_KLEPN	LEADER PEPTIDASE	KLEBSIELLA PNEUMONIAE	178-205											
PPULS_KLEPN	PULS PRECURSOR	KLEBSIELLA PNEUMONIAE	70-97											
PPUPA_PSEPU	UPTAKE PROTEIN PRECURSOR	PSEUDOMONAS PUTIDA	112-162	210-237	429-463	736-761								
PPUR1_BACSU	AMIDOPHOSPHORIBOSYLTRANSF PREC	BACILLUS SUBTILIS	394-421											
PPUR2_BACSU	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE	BACILLUS SUBTILIS	349-376											
PPUR3_BACSU	FORMYLTRANSFERASE	BACILLUS SUBTILIS	149-176											
PPUR4_ECOLI	FORMYLTRANSFERASE	ESCHERICHIA COLI	27-54											
PPUR4_BACSU	SYNTHASE I	BACILLUS SUBTILIS	18-45											
PPUR5_BACSU	CYCLO-LIGASE	BACILLUS SUBTILIS	153-194											
PPUR6_ECOLI	AIR CARBOXYLASE	ESCHERICHIA COLI	131-158											
PPUR7_BACSU	SAICAR SYNTHETASE	BACILLUS SUBTILIS	3-43											
PPUR8_BACSU	ADENYLOSUCCINATE LYASE	BACILLUS SUBTILIS	56-130	226-253										
PPUR8_ECOLI	ADENYLOSUCCINATE LYASE	ESCHERICHIA COLI	194-221	331-372										
PPUR9_BACSU	AICAR TRANSFORMYLASE	BACILLUS SUBTILIS	19-53	345-372										
PPUR9_ECOLI	AICAR TRANSFORMYLASE	ESCHERICHIA COLI	219-268											
PPUR9_SALTY	AICAR TRANSFORMYLASE	SALMONELLA TYPHIMURIUM	218-247											
PPURL_BACSU	SYNTHASE II	BACILLUS SUBTILIS	609-636											
PPYG1_ANASP	LINKER POLYPEPTIDE CPCG1	ANABAENA SP	88-115											
PPYG1_MASLA	LINKER POLYPEPTIDE CPCG1	MASTIGOCLADUS LAMINOSUS	89-116											
PPYG2_ANASP	LINKER POLYPEPTIDE CPCG2	ANABAENA SP	88-115											
PPYG2_MASLA	LINKER POLYPEPTIDE CPCG2	MASTIGOCLADUS LAMINOSUS	89-116											
PPYG3_MASLA	LINKER POLYPEPTIDE CPCG3	MASTIGOCLADUS LAMINOSUS	91-133											
PPYG4_ANASP	LINKER POLYPEPTIDE CPCG4	ANABAENA SP	90-131											
PPYR1_ANASP	32.1 KD LINKER POLYPEPTIDE	ANABAENA SP	35-62											
PPYR2_FREDI	27.9 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	105-132											
PPYR4_FREDI	31.6 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	22-66											
PPYR5_FREDI	33.5 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	106-143											
PPYR6_FREDI	30.8 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	43-70	113-140										
PPYRB_BACSU	ASPARTATE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	9-36											
PPYRB_SERMA	ASPARTATE CARBAMOYLTRANSFERASE	SERRATIA MARCESCENS	70-97											
PPYRD_ECOLI	DIHYDROOROTATE DEHYDROGENASE	ESCHERICHIA COLI	113-142											

PCGENE	10/17/94	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPYRD_SALTY	DIHYDROOROTATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	115-142	183-210							
PPYRG_BACSU	CTP SYNTHASE	BACILLUS SUBTILIS	275-302	322-349							
PPY51_FREDI	PHYCOBILISOME 9.7 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	21-48								
PQOR_ECOLI	QUINONE OXIDOREDUCTASE	ESCHERICHIA COLI	180-215								
PQUEA_ECOLI	QUEUOSINE BIOSYNTHESIS PROTEIN QUEA	ESCHERICHIA COLI	234-261								
PRJ4K_CLOPA	14.2 KD PROTEIN IN RUBREDOXIN OPERON	CLOSTRIDIUM PASTEURIANUM	21-50	157-232							
PRACC_ECOLI	RACC PROTEIN	ESCHERICHIA COLI	5-32								
PRACD_STRTR	ASPARTATE RACEMASE	STREPTOCOCCUS THERMOPHILUS	152-189								
PRACX_BACSU	PROBABLE AMINO ACID RACEMASE	BACILLUS SUBTILIS	132-162								
PRAFA_ECOLI	ALPHA-GALACTOSIDASE	ESCHERICHIA COLI	89-116								
PRAFD_ECOLI	RAFFINOSE INVERTASE	ESCHERICHIA COLI	340-373								
PRBSC_ECOLI	RIBOSE TRANSPORT SYSTEM COMPONENT	ESCHERICHIA COLI	65-99	193-222							
PRBSK_ECOLI	RIBOKINASE	ESCHERICHIA COLI	200-239								
PRBTR_KLEAE	RIBITOL (RBT) OPERON REPRESSOR	KLEBSIELLA AEROGENES	6-47								
PRCSA_ECOLI	BIOSYNTHESIS ACTIVATION PROTEIN A	ESCHERICHIA COLI	170-197								
PRCSA_ERWAM	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA AMYLOVORA	93-119	174-201							
PRCSA_ERWST	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA STEWARTII	174-201								
PRCSA_KLEAE	BIOSYNTHESIS ACTIVATION PROTEIN A	KLEBSIELLA AEROGENES	168-205								
PRCSB_ECOLI	CAPSULE SYNTHESIS B COMPONENT	ESCHERICHIA COLI	14-41	139-186							
PRCT2_LEGPN	RCSA PROTEIN	LEGIONELLA PNEUMOPHILA	262-310								
PRECA_ACHLA	RECA PROTEIN	ACHOLEPLASMA LAIDLAWII	283-310								
PRECA_AGRTU	RECA PROTEIN	AGROBACTERIUM TUMEFACIENS	3-30	132-159	281-308						
PRECA_ANAVA	RECA PROTEIN	ANABAENA VARIABILIS	322-349								
PRECA_AQUPY	RECA PROTEIN	AQUIFEX PYROPHILUS	63-90	126-153							
PRECA_BACFR	RECA PROTEIN	BACTEROIDES FRAGILIS	108-135								
PRECA_BACSU	RECE PROTEIN	BACILLUS SUBTILIS	267-294								
PRECA_BRUAB	RECA PROTEIN	BRUCELLA ABORTUS	3-30	132-159	280-307						
PRECA_BURCE	RECA PROTEIN	BURKHOLDERIA CEPACIA	35-109								
PRECA_ERWCA	RECA PROTEIN	ERWINIA CAROTOVORA	284-311								
PRECA_LACDE	RECA PROTEIN	LACTOBACILLUS DELBRUECKII	20-47								
PRECA_LACHE	RECA PROTEIN	LACTOBACILLUS HELVETICUS	20-47	135-162	232-269	288-315					
PRECA_LACLA	RECA PROTEIN	LACTOCOCCUS LACTIS	266-303								
PRECA_METCL	RECA PROTEIN	METHYLOMONAS CLARA	276-303								
PRECA_METFL	RECA PROTEIN	METHYLOBACILLUS FLAGELLATUM	30-57								
PRECA_MYCPU	RECA PROTEIN	MYCOPLASMA PULMONIS	249-276								
PRECA_MYCTU	RECA PROTEIN	MYCOBACTERIUM TUBERCULOSIS	263-310								
PRECA_NEIGO	RECA PROTEIN	NEISSERIA GONORRHOEAE	283-310								
PRECA_PROMI	RECA PROTEIN	PROTEUS MIRABILIS	282-309								
PRECA_PSEAE	RECA PROTEIN	PSEUDOMONAS AERUGINOSA	3-30	131-158	280-307						
PRECA_RHILP	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	119-146	268-295							
PRECA_RHILV	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	119-146	268-295							
PRECA_RHIME	RECA PROTEIN	RHIZOBIUM MELILOTI	119-146	268-295							
PRECA_RHOSH	RECA PROTEIN	RHODOBACTER SPHAEROIDES	119-146								
PRECA_STRPN	RECA PROTEIN	STREPTOCOCCUS PNEUMONIAE	134-161	293-327							
PRECA_SYNP2	RECA PROTEIN	SYNECHOCOCCUS SP	124-151								
PRECA_VIBCH	RECA PROTEIN	VIBRIO CHOLERAE	290-317								
PRECF_BACSU	RECF PROTEIN	BACILLUS SUBTILIS	4-31	178-205							
PRECF_ECOLI	RECF PROTEIN	ESCHERICHIA COLI	82-109	147-174							
PRECF_PROMI	RECF PROTEIN	PROTEUS MIRABILIS	86-113								
PRECF_PSEPU	RECF PROTEIN	PSEUDOMONAS PUTIDA	84-111								
PRECF_SALTY	RECF PROTEIN	SALMONELLA TYPHIMURIUM	147-174								
PRECI_ECOLI	EXONUCLEASE RECI	ESCHERICHIA COLI	53-79								
PRECN_BACSU	RECOMBINATION PROTEIN	BACILLUS SUBTILIS	21-48	136-184	192-247	299-336	344-378				
PRECQ_ECOLI	DNA HELICASE RECQ	ESCHERICHIA COLI	468-495								
PRELA_ECOLI	GTP PYROPHOSPHOKINASE	ESCHERICHIA COLI	680-707								
PREMA_BACSU	REPLICATION AND MAINTENANCE PROTEIN	BACILLUS SUBTILIS	2-36	81-108							
PREMA_STAAU	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS AUREUS	2-36	81-108							

PCGENE	107a1784	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PREMA_STAEP	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	2-36	81-108						
PREP1_ECOLI	REPLICATION PROTEIN REPA	ESCHERICHIA COLI	30-77	90-117						
PREPA_BACSU	REPA PROTEIN	BACILLUS SUBTILIS	342-373							
PREPA_ECOLI	REPA PROTEIN	ESCHERICHIA COLI	91-118	228-255						
PREPA_NEIGO	REPLICATION PROTEIN	NEISSERIA GONORRHOEAE	57-84	138-172						
PREPB_LACPL	REPLICATION PROTEIN REPD	LACTOBACILLUS PLANTARUM	184-211							
PREPM_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	254-284							
PREPN_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	258-285							
PREPR_STRAG	REPR PROTEIN	STREPTOCOCCUS AGALACTIAE	430-467							
PREPS_STRPY	REPS PROTEIN	STREPTOCOCCUS PYOGENES	423-467							
PREPX_STAAU	REP PROTEIN	STAPHYLOCOCCUS AUREUS	111-150	172-210						
PREPY_ECOLI	REPLICATION INITIATION PROTEIN	ESCHERICHIA COLI	288-315							
PREP_CLOPE	REPLICATION PROTEIN	CLOSTRIDIUM PERFRINGENS	168-195	297-324	343-375					
PREP_ECOLI	REP HELICASE	ESCHERICHIA COLI	119-146	205-243						
PREP_LACPL	REP PROTEIN	LACTOBACILLUS PLANTARUM	119-199	260-287						
PRESP_CLOPE	RESOLVASE	CLOSTRIDIUM PERFRINGENS	68-102	151-185						
PRF2_BACSU	PROBABLE PEPTIDE CHAIN RELEASE FACTOR 2	BACILLUS SUBTILIS	34-68							
PRF2_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 2	ESCHERICHIA COLI	86-113	163-204						
PRF2_SALTY	PEPTIDE CHAIN RELEASE FACTOR 2	SALMONELLA TYPHIMURIUM	86-113	163-204						
PRF3_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 3	ESCHERICHIA COLI	180-210	443-473						
PRFAB_ECOLI	1,6-GALACTOSYLTRANSFERASE	ESCHERICHIA COLI	199-226							
PRFAG_ECOLI	BIOSYNTHESIS PROTEIN RFAG	ESCHERICHIA COLI	185-212							
PRFAI_ECOLI	1,2-GLUCOSYLTRANSFERASE	ESCHERICHIA COLI	39-66	233-268						
PRFAJ_SALTY	1,2-GLUCOSYLTRANSFERASE	SALMONELLA TYPHIMURIUM	68-95	145-172	216-263					
PRFAK_SALTY	1,2-N-ACETYLGLUCOSAMINETRANSFERASE	SALMONELLA TYPHIMURIUM	135-169							
PRFAL_ECOLI	O-ANTIGEN LIGASE	ESCHERICHIA COLI	366-393							
PRFAL_SALTY	O-ANTIGEN LIGASE	SALMONELLA TYPHIMURIUM	326-360							
PRFAP_ECOLI	BIOSYNTHESIS PROTEIN RFAP	ESCHERICHIA COLI	8-35							
PRFAS_ECOLI	BIOSYNTHESIS PROTEIN RFAS	ESCHERICHIA COLI	62-89	144-240						
PRFAY_ECOLI	BIOSYNTHESIS PROTEIN RFAY	ESCHERICHIA COLI	18-45							
PRFAZ_ECOLI	BIOSYNTHESIS PROTEIN RFAZ	ESCHERICHIA COLI	1-30	85-112						
PRFBB_SALTY	DTDP-GLUCOSE 4,6-DEHYDRATASE	SALMONELLA TYPHIMURIUM	320-359							
PRFBM_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	311-361							
PRFBS_SALTI	PARATOSE SYNTHASE	SALMONELLA TYPHI	22-56	205-232						
PRFEA_VIBAN	PRECURSOR FOR FERRIC ANGUIBACTIN	VIBRIO ANGUILLARUM	349-376							
PRFH_ECOLI	PEPTIDE CHAIN RELEASE FACTOR HOMOLOG	ESCHERICHIA COLI	83-110							
PRGI2_BACTU	PUTATIVE G12 SITE-SPECIFIC RECOMBINASE	BACILLUS THURINGIENSIS	15-68	190-262	310-381					
PRHAB_ECOLI	RHAMNULOKINASE	ESCHERICHIA COLI	175-202							
PRHAB_SALTY	RHAMNULOKINASE	SALMONELLA TYPHIMURIUM	175-202							
PRHAR_ECOLI	L-RHAMNOSE OPERON TRANSACTIVATOR	ESCHERICHIA COLI	10-41							
PRHAS_ECOLI	L-RHAMNOSE OPERON REG PROTEIN RHAS	ESCHERICHIA COLI	152-179							
PRHIR_RHILV	RHIR REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	206-233							
PRHLB_ECOLI	RNA HELICASE RHLB/RAPA	ESCHERICHIA COLI	138-165							
PRHO_BORBU	TRANSTERMINATION FACTOR RHO	BORRELIA BURGDORFERI	215-242	327-369						
PRHPR_BACSU	PROTEASE PROD REG PROTEIN HPR	BACILLUS SUBTILIS	82-109							
PRHSA_ECOLI	RHSA PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694							
PRHSB_ECOLI	RHSB PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694							
PRHSC_ECOLI	RHSC PROTEIN PRECURSOR	ESCHERICHIA COLI	380-414	667-694	1036-1083					
PRHSD_ECOLI	RHSD PROTEIN PRECURSOR	ESCHERICHIA COLI	671-712	1071-1098						
PRHSE_ECOLI	RHSE PROTEIN	ESCHERICHIA COLI	345-372							
PRIC_ECOLI	ACETYLTRANSFERASE	ESCHERICHIA COLI	93-137							
PRIR2_ECOLI	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	ESCHERICHIA COLI	167-194							
PRISA_PHOLE	RIBOFLAVIN SYNTHASE ALPHA CHAIN	PHOTOBACTERIUM LEIOGNATHI	2-47	131-158						
PRISB_BACSU	RIBOFLAVIN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	8-35							
PRISB_PHOLE	RIBOFLAVIN SYNTHASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	14-41							
PRL10_STRAT	50S RIBOSOMAL PROTEIN L10	STREPTOMYCES ANTIBIOTICUS	14-32	106-133						
PRL12_SYNY3	50S RIBOSOMAL PROTEIN L12	SYNECHOCYSTIS SP	2-34							



PCGENE	10/17/94	Prokaryotic Sequences	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PRL12_THEMA	50S RIBOSOMAL PROTEIN L12	THERMOTOGA MARITIMA	8-35	56-86							
PRL14_BACST	50S RIBOSOMAL PROTEIN L14	BACILLUS STEAROTHERMOPHILUS	18-45								
PRL14_MICLU	50S RIBOSOMAL PROTEIN L14	MICROCOCCUS LUTEUS	18-45								
PRL14_MYCCA	50S RIBOSOMAL PROTEIN L14	MYCOPLASMA CAPRICOLUM	51-92								
PRL15_BACLI	50S RIBOSOMAL PROTEIN L15	BACILLUS LICHENIFORMIS	21-48								
PRL15_BACST	50S RIBOSOMAL PROTEIN L15	BACILLUS STEAROTHERMOPHILUS	93-134								
PRL15_BACSU	50S RIBOSOMAL PROTEIN L15	BACILLUS SUBTILIS	93-132								
PRL15_CHLTR	50S RIBOSOMAL PROTEIN L15	CHLAMYDIA TRACHOMATIS	116-144								
PRL15_ECOLI	50S RIBOSOMAL PROTEIN L15	ESCHERICHIA COLI	70-113								
PRL15_LACLA	50S RIBOSOMAL PROTEIN L15	LACTOCOCCUS LACTIS	8-35								
PRL15_METVA	50S RIBOSOMAL PROTEIN L15	METHANOCOCCUS VANNIELII	68-102								
PRL15_MYCCA	50S RIBOSOMAL PROTEIN L15	MYCOPLASMA CAPRICOLUM	63-135								
PRL18_BACST	50S RIBOSOMAL PROTEIN L18	BACILLUS STEAROTHERMOPHILUS	31-58								
PRL18_CHLTR	50S RIBOSOMAL PROTEIN L18	CHLAMYDIA TRACHOMATIS	32-86								
PRL18_HALMA	50S RIBOSOMAL PROTEIN L18	HALOARCULA MARISMORTUI	80-107								
PRL18_MYCCA	50S RIBOSOMAL PROTEIN L18	MYCOPLASMA CAPRICOLUM	61-88								
PRL19_ECOLI	50S RIBOSOMAL PROTEIN L19	ESCHERICHIA COLI	23-52								
PRL19_HALMA	50S RIBOSOMAL PROTEIN L19	HALOARCULA MARISMORTUI	101-128								
PRL19_METVA	PROBABLE 50S RIBOSOMAL PROTEIN	METHANOCOCCUS VANNIELII	45-72								
PRL1_PROVU	50S RIBOSOMAL PROTEIN L1	PROTEUS VULGARIS	159-194								
PRL1_SULSO	50S RIBOSOMAL PROTEIN L1	SULFOLOBUS SOLFATARICUS	5-32	184-211							
PRL20_ECOLI	50S RIBOSOMAL PROTEIN L20	ESCHERICHIA COLI	14-41								
PRL20_MYCFE	50S RIBOSOMAL PROTEIN L20	MYCOPLASMA FERMENTANS	14-41								
PRL21_BACSU	50S RIBOSOMAL PROTEIN L21	BACILLUS SUBTILIS	4-38								
PRL22_ECOLI	50S RIBOSOMAL PROTEIN L22	ESCHERICHIA COLI	28-55								
PRL23_METVA	50S RIBOSOMAL PROTEIN L23	METHANOCOCCUS VANNIELII	30-57								
PRL23_MYCCA	50S RIBOSOMAL PROTEIN L23	MYCOPLASMA CAPRICOLUM	32-59								
PRL24_HALMA	50S RIBOSOMAL PROTEIN L24	HALOARCULA MARISMORTUI	48-75								
PRL24_METVA	50S RIBOSOMAL PROTEIN L24	METHANOCOCCUS VANNIELII	61-90								
PRL24_MICLU	50S RIBOSOMAL PROTEIN L24	MICROCOCCUS LUTEUS	36-63								
PRL29_CHLTR	50S RIBOSOMAL PROTEIN L29	CHLAMYDIA TRACHOMATIS	39-66								
PRL29_ECOLI	50S RIBOSOMAL PROTEIN L29	ESCHERICHIA COLI	36-63								
PRL29_MYCCA	50S RIBOSOMAL PROTEIN L29	MYCOPLASMA CAPRICOLUM	39-85								
PRL4_BACST	50S RIBOSOMAL PROTEIN L4	BACILLUS STEAROTHERMOPHILUS	141-168								
PRL4_MYCCA	50S RIBOSOMAL PROTEIN L4	MYCOPLASMA CAPRICOLUM	144-198								
PRL5_THETH	50S RIBOSOMAL PROTEIN L5	THERMUS AQUATICUS	38-65								
PRL6_BACST	50S RIBOSOMAL PROTEIN L6	BACILLUS STEAROTHERMOPHILUS	79-106								
PRL6_ECOLI	50S RIBOSOMAL PROTEIN L6	ESCHERICHIA COLI	19-46								
PRL6_METVA	50S RIBOSOMAL PROTEIN L6	METHANOCOCCUS VANNIELII	129-159								
PRL9_BACST	50S RIBOSOMAL PROTEIN L9	BACILLUS STEAROTHERMOPHILUS	47-77								
PRL9_ECOLI	50S RIBOSOMAL PROTEIN L9	ESCHERICHIA COLI	122-149								
PRLA0_HALCU	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	HALOBACTERIUM CUTIRUBRUM	138-182								
PRLA0_HALHA	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	HALOBACTERIUM HALOBIUM	138-182								
PRLA0_HALMA	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	HALOARCULA MARISMORTUI	64-91	153-184							
PRLA0_METVA	ACIDIC RIBOSOMAL PROTEIN P0 HOMOLOG	METHANOCOCCUS VANNIELII	194-221								
PRLA_HALEU	RIBOSOMAL PROTEIN 'A'	HALOPHILIC EUBACTERIUM NRCC 41227	59-86								
PRLA_HALHA	50S RIBOSOMAL PROTEIN L20	HALOBACTERIUM HALOBIUM	2-29								
PRLA_HALMA	50S RIBOSOMAL PROTEIN L12	HALOARCULA MARISMORTUI	2-29								
PRLA_METVA	RIBOSOMAL PROTEIN 'A'	METHANOCOCCUS VANNIELII	2-29								
PRLA_MICLU	70S RIBOSOMAL PROTEIN MA	MICROCOCCUS LUTEUS	55-82	90-117							
PRLX1_SALTY	43 KD RELAXATION PROTEIN	SALMONELLA TYPHIMURIUM	226-260								
PRLX1_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	102-132	177-218	266-300					
PRLX2_SALTY	22 KD RELAXATION PROTEIN	SALMONELLA TYPHIMURIUM	19-53								
PRLX2_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	102-133	261-293						
PRLX3_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	3-30	146-216							
PRLX_SULSO	50S RIBOSOMAL PROTEIN LX	SULFOLOBUS SOLFATARICUS	32-63								
RNHR_BACAM	RIBONUCLEASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	33-67	129-156							

PCGENE	Prokaryote Sequences								
FILENAME	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRNC_ECOLI	ESCHERICHIA COLI	10-37	117-144							
PRNE_ECOLI	ESCHERICHIA COLI	413-440	628-662							
PRNPA_BUCAP	BUCHNERA APHIDICOLA	85-114								
PRNPH_BACSU	BACILLUS SUBTILIS	159-186								
PRNS_ECOLI	ESCHERICHIA COLI	116-160								
PRN_BACCI	BACILLUS CIRCULANS	82-109								
PRN_BACIN	BACILLUS INTERMEDIUS	38-72								
PRP1B_BACTK	BACILLUS THURINGIENSIS	73-107								
PRP1J_CITFR	CITROBACTER FREUNDII	20-57								
PRP1S_BACTK	BACILLUS THURINGIENSIS	8-35	63-90							
PRP34_ALCEU	ALCALIGENES EUTROPHUS	229-266								
PRP34_AZOCA	AZORHIZOBIUM CAULINODANS	174-208								
PRP34_BACSU	BACILLUS SUBTILIS	16-43	97-124	274-308	396-423					
PRP34_BRAJA	BRADYRHIZOBIUM JAPONICUM	97-124								
PRP34_KLEPN	KLEBSIELLA PNEUMONIAE	148-182								
PRP34_RHOCA	RHODOBACTER CAPSULATUS	155-185								
PRP35_BRAJA	BRADYRHIZOBIUM JAPONICUM	145-172								
PRP3M_ALCEU	ALCALIGENES EUTROPHUS	21-51								
PRP3M_ECOLI	ESCHERICHIA COLI	21-67								
PRP3N_SALTY	SALMONELLA TYPHIMURIUM	21-67								
PRP70_BUCAP	BUCHNERA APHIDICOLA	69-96	109-136	173-217	228-253	303-337				
PRP70_CHLTR	CHLAMYDIA TRACHOMATIS	5-32								
PRP70_ECOLI	ESCHERICHIA COLI	327-361								
PRP70_PSEAE	PSEUDOMONAS AERUGINOSA	334-368								
PRP70_RICPR	RICKETTSIA PROWAZEKII	244-321	348-382							
PRP80_MYXXA	MYXOCOCCUS XANTHUS	208-235	318-347	359-386						
PRPCF_SYNPY	SYNECHOCOCCUS SP	180-207								
PRPOA_BACSU	BACILLUS SUBTILIS	55-107								
PRPOA_ECOLI	ESCHERICHIA COLI K	57-105								
PRPOA_HALHA	SALMONELLA TYPHIMURIUM	863-904								
PRPOA_HALMO	HALOBACTERIUM HALOBIUM	229-270								
PRPOA_METTH	HALOCOCCUS MORRHUAE	418-513	643-669							
PRPOA_SULAC	METHANOBACTERIUM THERMOAUTOTROPHICU	222-256	590-527	693-720						
PRPOA_THECE	SULFOLOBUS ACIDOCALDARIUS	278-262								
PRPOB_ECOLI	THERMOCOCCUS CELER	599-626	1011-1038							
PRPOB_MYCLE	ESCHERICHIA COLI	723-760	1084-1111							
PRPOB_SALTY	MYCOBACTERIUM LEPRAE	599-626	938-985	1011-1038						
PRPOB_SULAC	SALMONELLA TYPHIMURIUM	160-187	235-282	534-561	827-861					
PRPOB_THEMA	SULFOLOBUS ACIDOCALDARIUS	350-377								
PRPOC_ANASP	THERMOTOGA MARITIMA	132-194								
PRPOC_ECOLI	ANABAENA SP	786-813	948-994	1221-1257						
PRPOC_HALHA	ESCHERICHIA COLI	1175-202								
PRPOC_HALMO	HALOBACTERIUM HALOBIUM	27-54	117-144	207-234						
PRPOC_METTH	HALOCOCCUS MORRHUAE	58-85	272-302	327-354						
PRPOC_MYCLE	METHANOBACTERIUM THERMOAUTOTROPHICU	273-300	860-887	911-938	1131-1158					
PRPOC_NOSCO	MYCOBACTERIUM LEPRAE	150-192								
PRPOC_SULAC	NOSTOC COMMUNE	36-63	172-214	224-251						
PRPOC_THECE	SULFOLOBUS ACIDOCALDARIUS	21-58								
PRPOD_NOSCO	THERMOCOCCUS CELER	72-116	403-449	539-566						
PRPOE_ECOLI	NOSTOC COMMUNE	5-39								
PRPOS_ECOLI	ESCHERICHIA COLI	281-308								
PRPOU_HALHA	ESCHERICHIA COLI	91-118								
PRPSA_AGRTU	HALOBACTERIUM HALOBIUM	310-347	397-427							
PRPSA_ANASP	AGROBACTERIUM TUMEFACIENS	71-103								
PRPSA_CLOAB	ANABAENA SP	2-39								
PRPSA_STRAU	CLOSTRIDIUM ACETOBUTYLICUM	278-305								
	STREPTOMYCES AUREOFACIENS									

PCGENE	10?:1?8:4	Prokaryotic Sequences	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
ENTRY	PROTEIN	ORGANISM									
PRPSB_ANASP	RNA POLYMERASE SIGMA-B FACTOR	ANABAENA SP	4-31								
PRPSB_BACSU	RNA POLYMERASE SIGMA-B FACTOR	BACILLUS SUBTILIS	3-33	169-196	200-230						
PRPSB_MYXXA	RNA POLYMERASE SIGMA-B FACTOR	MYXOCOCCUS XANTHUS	41-74								
PRPSB_STIAU	RNA POLYMERASE SIGMA-B FACTOR	STIGMATELLA AURANTIACA	96-133								
PRPSC_ANASP	RNA POLYMERASE SIGMA-C FACTOR	ANABAENA SP	38-85								
PRPSD_BACSU	RNA POLYMERASE SIGMA-D FACTOR	BACILLUS SUBTILIS	192-249								
PRPSE_BACSU	RNA POLYMERASE SIGMA-E FACTOR PRECURSOR	BACILLUS SUBTILIS	61-90								
PRPSE_CLOAB	RNA POLYMERASE SIGMA-E FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	14-41	116-160							
PRPSF_BACLI	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS LICHENIFORMIS	4-31	191-248							
PRPSF_BACME	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS MEGATERIUM	191-225								
PRPSF_BACSU	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS SUBTILIS	4-31	191-248							
PRPSH_BACLI	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS LICHENIFORMIS	191-218								
PRPSH_BACSU	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS SUBTILIS	186-213								
PRPSK_BACSU	RNA POLYMERASE SIGMA-K FACTOR	BACILLUS SUBTILIS	35-109	189-216							
PRPSP_STAAU	RNA POLYMERASE SIGMA FACTOR PLAC	STAPHYLOCOCCUS AUREUS	19-46								
PRPSW_STRCO	RNA POLYMERASE SIGMA FACTOR WHIG	STREPTOMYCES COELICOLOR	212-273								
PRPSX_BACTK	POSSIBLE RNA POLYMERASE SIGMA-G FACTOR	BACILLUS THURINGIENSIS	33-60								
PRS10_ECOLI	30S RIBOSOMAL PROTEIN S10	ESCHERICHIA COLI	3-30								
PRS11_BACSU	30S RIBOSOMAL PROTEIN S11	BACILLUS SUBTILIS	8-42								
PRS13_BACSU	30S RIBOSOMAL PROTEIN S13	BACILLUS SUBTILIS	44-83								
PRS17_METVA	30S RIBOSOMAL PROTEIN S17	METHANOCOCCUS VANNIELII	34-73								
PRS1_ECOLI	30S RIBOSOMAL PROTEIN S1	ESCHERICHIA COLI	99-126	144-171							
PRS1_PROSP	30S RIBOSOMAL PROTEIN S1	PROVIDENCIA SP	39-66	265-292	349-376						
PRS1_RHIME	30S RIBOSOMAL PROTEIN S1	RHIZOBIUM MELILOTI	91-125	172-217							
PRS21_BACST	30S RIBOSOMAL PROTEIN S21	BACILLUS STEAROTHERMOPHILUS	1-28								
PRS2_SPICI	30S RIBOSOMAL PROTEIN S2	SPIROPLASMA CITRI	91-125								
PRS3_ACHLA	30S RIBOSOMAL PROTEIN S3	ACHOLEPLASMA LAIDLAWII	83-110								
PRS3_MYCCA	30S RIBOSOMAL PROTEIN S3	MYCOPLASMA CAPRICOLUM	77-106	136-163							
PRS4_ECOLI	30S RIBOSOMAL PROTEIN S4	ESCHERICHIA COLI	30-77								
PRS5_HALMA	30S RIBOSOMAL PROTEIN S5	HALOARCULA MARISMORTUI	160-187	182-216							
PRS5_MYCCA	30S RIBOSOMAL PROTEIN S5	MYCOPLASMA CAPRICOLUM	33-62								
PRS6_THETH	30S RIBOSOMAL PROTEIN S6	THERMUS AQUATICUS	16-43								
PRS7_METVA	30S RIBOSOMAL PROTEIN S7	METHANOCOCCUS VANNIELII	69-96								
PRS7_MYCLE	30S RIBOSOMAL PROTEIN S7	MYCOBACTERIUM LEPRAE	22-49								
PRS8_MICLU	30S RIBOSOMAL PROTEIN S8	MICROCOCCUS LUTEUS	103-130								
PRS8_MYCCA	30S RIBOSOMAL PROTEIN S8	MYCOPLASMA CAPRICOLUM	41-78								
PRSGA_ECOLI	FERRUTIN LIKE PROTEIN	ESCHERICHIA COLI	80-107								
PRT07_ECOLI	RNA-DIRECTED DNA POLYMERASE	ESCHERICHIA COLI	225-268								
PSACB_BACAM	LEVANSUCRASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	175-202	254-281							
PSACB_BACSU	LEVANSUCRASE PRECURSOR	BACILLUS SUBTILIS	175-202	254-288							
PSACB_STRMU	LEVANSUCRASE PRECURSOR	STREPTOCOCCUS MUTANS	31-45	155-189	314-369						
PSACQ_BACLI	SACQ REGULATORY FACTOR	BACILLUS LICHENIFORMIS	2-46								
PSACT_BACSU	SACPA OPERON ANTITERMINATOR	BACILLUS SUBTILIS	102-139	189-216							
PSAGP_STRPY	STREPTOCOCCAL ACID GLYCOPROTEIN	STREPTOCOCCUS PYOGENES	294-331	362-389							
PSAOX_BACSN	SARCOSINE OXIDASE	BACILLUS SP	330-377								
PSAS2_CLOBI	SPORE PROTEIN	CLOSTRIDIUM BIFERMENTANS	17-47								
PSASG_BACCE	SPORE PROTEIN GAMMA-TYPE	BACILLUS CEREUS	31-58								
PSASG_BACST	SPORE PROTEIN GAMMA-TYPE	BACILLUS STEAROTHERMOPHILUS	37-64								
PSBCC_ECOLI	EXONUCLEASE SBCC	ESCHERICHIA COLI	218-260	337-364	535-585	622-656	778-812	821-865	915-942		
PSBCD_ECOLI	EXONUCLEASE SBCD	ESCHERICHIA COLI	137-164	334-397							
PSBM_ECOLI	SBM PROTEIN	ESCHERICHIA COLI	5-32	436-470	553-580						
PSBP_BACSU	SBP PROTEIN	BACILLUS SUBTILIS	28-55								
PSCPA_STRPY	C5A PEPTIDASE PRECURSOR	STREPTOCOCCUS PYOGENES	126-160	784-811	831-880						
PSCRB_KLEPN	SUCROSE-6-PHOSPHATE HYDROLASE	KLEBSIELLA PNEUMONIAE	174-201								
PSCRD_LACLA	SUCROSE-6-PHOSPHATE HYDROLASE	LACTOCOCCUS LACTIS	181-217	334-383	393-422						
PSCRD_STRMU	SUCROSE-6-PHOSPHATE HYDROLASE	STREPTOCOCCUS MUTANS	335-362								
PSCRK_SALTI	FRUCTOKINASE	SALMONELLA TYPHIMURIUM	97-124								

PCGENE	107s17b14	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PSCRK_SALTY	FRUCTOKINASE	SALMONELLA TYPHIMURIUM	183-210								
PSCRK_KLEPN	SUCROSE PORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	61-88	240-267							
PSCRY_SALTY	SUCROSE PORIN PRECURSOR	SALMONELLA TYPHIMURIUM	16-54	61-88	240-267						
PSECA_BACSU	PREPROTEIN TRANSLOCASE SECA SUBUNIT	BACILLUS SUBTILIS	12-39	226-260							
PSECA_ECOLI	PREPROTEIN TRANSLOCASE SECA SUBUNIT	ESCHERICHIA COLI	160-387	453-481							
PSECB_ECOLI	PROTEIN-EXPORT PROTEIN SECB	ESCHERICHIA COLI	41-68	378-412							
PSECD_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECD	ESCHERICHIA COLI	46-73								
PSECF_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECF	ESCHERICHIA COLI	174-201								
PSECY_ECOLI	PREPROTEIN TRANSLOCASE SECY SUBUNIT	ESCHERICHIA COLI	101-128								
PSECY_LACLA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	LACTOCOCCUS LACTIS	403-430								
PSECY_METVA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	METHANOCOCCUS VANNIELII	131-161	396-423							
PSECY_STACA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	STAPHYLOCOCCUS CARNOSUS	149-191								
PSEFC_SALEN	SEFC PROTEIN PRECURSOR	SALMONELLA ENTERITIDIS	137-164	475-533							
PSERA_BACSU	D-3-PHOSPHOGLYCERATE DEHYDROGENASE	BACILLUS SUBTILIS	16-43	347-374							
PSFAA_ECOLI	S-FIMBRIAL PROTEIN SUBUNIT PRECURSOR	ESCHERICHIA COLI	11-38								
PSFSA_ECOLI	SUGAR FERMENTATION STIMULATION PROTEIN	ESCHERICHIA COLI	81-115								
PSFUA_SERMA	IRON-TRANSPORT SFUA PROTEIN PRECURSOR	SERRATIA MARCESCENS	34-61								
PSHU1_ECOLI	SHUFFLON PROTEIN A	ESCHERICHIA COLI	224-262								
PSHU2_ECOLI	SHUFFLON PROTEIN A'	ESCHERICHIA COLI	224-262								
PSHU3_ECOLI	SHUFFLON PROTEIN B	ESCHERICHIA COLI	224-262								
PSHU4_ECOLI	SHUFFLON PROTEIN B'	ESCHERICHIA COLI	224-262	402-439							
PSHU5_ECOLI	SHUFFLON PROTEIN C	ESCHERICHIA COLI	224-262								
PSHU6_ECOLI	SHUFFLON PROTEIN C	ESCHERICHIA COLI	224-262								
PSHU7_ECOLI	SHUFFLON PROTEIN D'	ESCHERICHIA COLI	224-262								
PSINR_BACLI	SINR PROTEIN	BACILLUS LICHENIFORMIS	9-36	43-80							
PSINR_BACSU	SINR PROTEIN	BACILLUS SUBTILIS	9-36	43-70							
PSLAP_ACEKI	CELL SURFACE PROTEIN PRECURSOR	ACETOGENIUM KIVUI	237-264	282-309	313-453	458-489	517-544	561-593	641-685	726-753	
PSLPA_ECOLI	PROPHAGE CP4-57 INTEGRASE	ESCHERICHIA COLI	91-136								
PSMF_ECOLI	SMF PROTEIN	ESCHERICHIA COLI	24-51								
PSMFD_ECOLI	SMALL PROTEIN D	ESCHERICHIA COLI	27-61	90-117							
PSMF_ECOLI	SMF PROTEIN PRECURSOR	ESCHERICHIA COLI	31-98								
PSMTB_SYNP7	TRANSCRIPTIONAL REPRESSOR SMTB	SYNECHOCOCCUS SP	62-96								
PSODF_COXBU	SUPEROXIDE DISMUTASE	COXIELLA BURNETII	116-143								
PSODF_ECOLI	SUPEROXIDE DISMUTASE	ESCHERICHIA COLI	115-142								
PSODF_METTH	SUPEROXIDE DISMUTASE	METHANOBACTERIUM THERMOAUTOTROPHICU	25-52								
PSODF_PHOLE	SUPEROXIDE DISMUTASE	PHOTOBACTERIUM LEIOGNATHI	22-63								
PSODM_PROFR	SUPEROXIDE DISMUTASE	PROPIONIBACTERIUM FREUDENREICHII	164-191								
PSOHB_ECOLI	SOHB PROTEIN PRECURSOR	ESCHERICHIA COLI	7-48	70-97	233-300						
PSOPB_ECOLI	SOPB PROTEIN	ESCHERICHIA COLI	252-279								
PSOXR_ECOLI	SOXR PROTEIN	ESCHERICHIA COLI	16-63								
PSP01_BACSU	STAGE 0 SPORULATION PROTEIN J	BACILLUS SUBTILIS	131-158								
PSP1A_BACME	STAGE II SPORULATION PROTEIN AA	BACILLUS MEGATERIUM	19-53								
PSP1A_BACSU	STAGE II SPORULATION PROTEIN AA	BACILLUS SUBTILIS	21-55								
PSP1B_BACLI	STAGE II SPORULATION PROTEIN AB	BACILLUS LICHENIFORMIS	42-69								
PSP1B_BACME	STAGE II SPORULATION PROTEIN AB	BACILLUS MEGATERIUM	36-73								
PSP1D_BACSU	STAGE II SPORULATION PROTEIN D	BACILLUS SUBTILIS	134-161								
PSP1G_BACTK	POSSIBLE ASPARTYL PROTEASE	BACILLUS THURINGIENSIS	4-36	117-144							
PSP1J_BACSU	STAGE II SPORULATION PROTEIN J	BACILLUS SUBTILIS	14-44	463-500							
PSP1D_BACSU	STAGE III SPORULATION PROTEIN D	BACILLUS SUBTILIS	9-36	52-86							
PSP1J_BACBU	STAGE III SPORULATION PROTEIN J PRECURSOR	BACILLUS SUBTILIS	44-75								
PSP4A_BACSU	STAGE IV SPORULATION PROTEIN A	BACILLUS SUBTILIS	139-180								
PSP4B_BACSU	STAGE IV SPORULATION PROTEIN B	BACILLUS SUBTILIS	39-66								
PSP4G_BACSU	STAGE IV SPORULATION PROTEIN FB	BACILLUS SUBTILIS	251-278								
PSP5A_BACSU	STAGE V SPORULATION PROTEIN AF	BACILLUS SUBTILIS	9-36								
PSPAA_STRDO	ANTIGEN I	STREPTOCOCCUS DOWNEI	184-218								
PSPAB_BACSU	SUBTILIN BIOSYNTHESIS 117 KD PROTEIN	BACILLUS SUBTILIS	181-208								
PSPAC_BACSU	SUBTILIN BIOSYNTHESIS PROTEIN SPAC	BACILLUS SUBTILIS	311-338								

PCGENE	10?a??a?4	Prokaryotic Sequences									
ELEMAP	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
P5PAK_BACSU	SENSOR PROTEIN SPAK	BACILLUS SUBTILIS	80-107	224-251	290-324						
P5PAP_STRMU	CELL SURFACE ANTIGEN I/II PRECURSOR	STREPTOCOCCUS MUTANS	122-276	281-465	538-565	576-630	1071-1098	1135-1182	1377-1430		
P5PAR_BACSU	REGULATORY PROTEIN	BACILLUS SUBTILIS	4-31	172-199							
P5PAT_BACSU	SUBTILIN TRANSPORT PROTEIN SPAT	BACILLUS SUBTILIS	53-82	226-267							
P5PEC_STRPY	EXOTOXIN TYPE C PRECURSOR	STREPTOCOCCUS PYOGENES	12-39								
P5PIR_SPICI	SPIRALIN	SPIROPLASMA CITRI	82-109	135-182							
P5PIR_SPIME	SPIRALIN	SPIROPLASMA MELLIFERUM	195-222								
P5POT_ECOLI	GUAN-3',5'-BIS(DIPHOS) 3'-PYROPHOSPHOHYDROLA	ESCHERICHIA COLI	637-664								
P5PPA_ECOLI	PROTEASE IV	ESCHERICHIA COLI	278-305								
P5QHC_ZYMMO	SQUALENE-HOPENE CYCLASE	ZYMOMONAS MOBILIS	590-617								
P5RFA_BACSU	SURFACTIN SYNTHETASE SUBUNIT A	BACILLUS SUBTILIS	139-186	244-271							
P5RP3_ECOLI	SIGNAL RECOGNITION PARTICLE PROTEIN	ESCHERICHIA COLI	301-328								
P5RP1_MYCMY	SIGNAL RECOGNITION PARTICLE PROTEIN	MYCOPLASMA MYCOIDES	21-65	107-141	394-428						
P5SAI_PASHA	SEROTYPE-SPECIFIC ANTIGEN I PRECURSOR	PASTEURELLA HAEMOLYTICA	151-178	358-385	465-518	529-570	860-904				
P5SAB_STRPA	ADHESIN B PRECURSOR	STREPTOCOCCUS PARASANGUIS	32-59								
P5SAB_STRSA	ADHESIN B PRECURSOR	STREPTOCOCCUS SANGUIS	21-59	101-128							
P5SB_ECOLI	SINGLE-STRAND BINDING PROTEIN	ESCHERICHIA COLI	68-95								
P5SB_PROMI	SINGLE-STRAND BINDING PROTEIN	PROTEUS MIRABILIS	63-104								
P5SB_SERMA	SINGLE-STRAND BINDING PROTEIN	SERRATIA MARCESCENS	63-104								
P5SP5_STRSA	AGGLUTININ RECEPTOR PRECURSOR	STREPTOCOCCUS SANGUIS	131-173	178-287	295-481	565-592	676-710	1081-1131			
P5TAV_STRAV	STREPTAVIDIN PRECURSOR	STREPTOMYCES AVIDINII	125-152								
P5TA_ECOLI	STREPTOTHRICIN ACETYLTRANSFERASE	ESCHERICHIA COLI	66-93								
P5TC1_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-119	172-199	280-311						
P5TC2_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-117	264-291							
P5TC_CLOBE	L-TRANSD TRANSC CONTROL PROTEIN	CLOSTRIDIUM BEIJERINCKII	47-74								
P5TPA_ECOLI	STPA PROTEIN	ESCHERICHIA COLI	36-63								
P5TR1_STRGR	INOSAMINE-PHOSPHATE AMIDINOTRANSFERASE 1	STREPTOMYCES GRISEUS	183-210								
P5TRP_STREQ	STREPTOKINASE C PRECURSOR	STREPTOCOCCUS EQUISIMILIS	208-236	281-308							
P5TRP_STRPY	STREPTOKINASE A PRECURSOR	STREPTOCOCCUS PYOGENES	209-236								
P5TRP_STRSP	STREPTOKINASE G PRECURSOR	STREPTOCOCCUS SP	209-236	281-308							
P5UBE_BACSU	MINOR EXTRACELLULAR PROTEASE EPR PREC	BACILLUS SUBTILIS	435-462	522-563	605-639						
P5UBF_BACSU	BACILLOPEPTIDASE F PRECURSOR	BACILLUS SUBTILIS	40-67	89-116	121-148	534-597					
P5UBI_SALTY	SULFATE-BINDING PROTEIN	SALMONELLA TYPHIMURIUM	37-74								
P5UBI_SYNP7	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCOCCUS SP	63-94								
P5UBI_SYNY3	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCYSTIS SP	64-91								
P5UBT_BACLI	SUBTILISIN CARLSBERG PRECURSOR	BACILLUS LICHENIFORMIS	191-222								
P5UBT_BACM5	SUBTILISIN	BACILLUS MESENTERICUS	91-118								
P5UBT_BAC59	SUBTILISIN PRECURSOR	BACILLUS SP	36-63	236-277							
P5UBT_BACSA	SUBTILISIN AMYLOSACCHARITICUS PRECURSOR	BACILLUS SUBTILIS	197-224								
P5UBT_BACSD	SUBTILISIN	BACILLUS SUBTILIS	86-117								
P5UBT_BACST	SUBTILISIN J PRECURSOR	BACILLUS STEAROTHERMOPHILUS	197-224								
P5UBT_BACSU	SUBTILISIN E PRECURSOR	BACILLUS SUBTILIS	197-224								
P5UBV_BACSU	MINOR EXTRACELLULAR PROTEASE VPR PRECUR	BACILLUS SUBTILIS	55-108	613-654	741-768						
P5UCC_ECOLI	SUCCINYL-COA SYNTHETASE BETA	ESCHERICHIA COLI	62-89								
P5UCP_AGRVI	SUCROSE PHOSPHORYLASE	AGROBACTERIUM VITIS	449-476								
P5ULA_ENTAE	CELL DIVISION INHIBITOR	ENTEROBACTER AEROGENES	112-139								
P5YA_ECOLI	ALANYL-TRNA SYNTHETASE	ESCHERICHIA COLI	257-287	725-752	790-821						
P5YD_ECOLI	ASPARTYL-TRNA SYNTHETASE	ESCHERICHIA COLI	330-357								
P5YE_BACST	GLUTAMYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	49-76								
P5YE_BACSU	GLUTAMYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	49-76	351-386							
P5YE_THETH	GLUTAMYL-TRNA SYNTHETASE	THERMUS AQUATICUS	403-432								
P5YFA_BACSU	PHENYLALANYL-TRNA SYNTHETASE A CHAIN	BACILLUS SUBTILIS	7-34								
P5YFB_BACSU	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	BACILLUS SUBTILIS	340-367	407-441							
P5YFB_ECOLI	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	546-573	607-634	744-771						
P5YGB_ECOLI	GLYCYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	354-381	487-514							
P5YH_STREQ	HISTIDYL-TRNA SYNTHETASE	STREPTOCOCCUS EQUISIMILIS	376-403								
P5YT_METTH	ISOLEUCYL-TRNA SYNTHETASE	METHANOBACTERIUM THERMOAUTOTROPHICU	1010-1037								

PGCGNE	10721784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE_NAME	PROTEIN	ORGANISM	283-310								
P5YK1_ECOLI	LYSYL-TRNA SYNTHETASE	ESCHERICHIA COLI	45-72	283-310							
P5YK2_ECOLI	LYSYL-TRNA SYNTHETASE, HEAT INDUCIBLE	ESCHERICHIA COLI									
P5YL_ECOLI	LEUCYL-TRNA SYNTHETASE	ESCHERICHIA COLI	220-247								
P5YM_BACST	METHIONYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	69-99								
P5YN_ECOLI	METHIONYL-TRNA SYNTHETASE	ESCHERICHIA COLI	87-124								
P5YP_ECOLI	PROLYL-TRNA SYNTHETASE	ESCHERICHIA COLI	341-368								
P5YQ_ECOLI	GLUTAMINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	194-221								
P5YRD_PSESY	SYRD PROTEIN	PSEUDOMONAS SYRINGAE	449-483								
P5YR_ECOLI	ARGINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	340-374								
P5YT1_BACSU	THREONYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	401-428	603-639							
P5YV_BACST	VALYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	603-630	809-843							
P5YV_ECOLI	VALYL-TRNA SYNTHETASE	ESCHERICHIA COLI	300-337	882-912	924-951						
P5YW_BACST	TRYPTOPHANYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	204-231	239-266							
P5YY1_BACSU	TYROSYL-TRNA SYNTHETASE 1	BACILLUS SUBTILIS	81-115	375-409							
P5YY2_BACSU	TYROSYL-TRNA SYNTHETASE 2	BACILLUS SUBTILIS	69-96								
P5YY_BACCA	TYROSYL-TRNA SYNTHETASE	BACILLUS CALDOTENAX	295-322	372-416							
P5YY_BACST	TYROSYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	295-322	372-416							
P5YY_ECOLI	ENZYME ECOR1240 I N PROTEIN	ESCHERICHIA COLI	126-167	405-432	485-512						
P7IR1_ECOLI	ENZYME ECOR1240 R PROTEIN	ESCHERICHIA COLI	30-57	624-651	702-736	768-795	843-870	966-1000			
P7IR_ECOLI	ENZYME ECOK I R PROTEIN	ESCHERICHIA COLI	158-265								
P7I5I_ECOLI	ENZYME ECOR1240 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	154-181								
P7I5A_ECOLI	ENZYME ECOA I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
P7I5B_ECOLI	ENZYME ECOB I SPECIFICITY PROTEIN	ESCHERICHIA COLI	278-312								
P7I5D_ECOLI	ENZYME ECOD I SPECIFICITY PROTEIN	ESCHERICHIA COLI	249-283								
P7I5E_ECOLI	ENZYME ECOE I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
P7I5_SALPO	ENZYME SPECIFICITY PROTEIN	SALMONELLA POTSDAN	396-423								
P7I5_SALTY	ENZYME SPECIFICITY PROTEIN	SALMONELLA TYPHIMURIUM	194-221	276-304	402-429						
P7I5F_ECOLI	TYPE IIS RESTRICTION ENZYME ECO57I	ESCHERICHIA COLI	138-196	265-293	406-440	639-682	687-728	926-954			
P7I5I_ACICA	TYPE II RESTRICTION ENZYME ACCI	ACINETOBACTER CALCOACETICUS	49-76								
P7I8F_BACSU	TYPE II RESTRICTION ENZYME BSUFI	BACILLUS SUBTILIS	3-43	135-223	236-280						
P7I8R_BACSU	TYPE II RESTRICTION ENZYME BSURI	BACILLUS SUBTILIS	3-45	338-384	401-430	532-559					
P7I9I_CITFR	TYPE II RESTRICTION ENZYME CFRBI	CITROBACTER FREUNDII	33-62								
P7I9I_HERAU	TYPE II RESTRICTION ENZYME HGICI	HERPETOSIPHON AURANTIACUS	176-215								
P7I9I_HERAU	TYPE II RESTRICTION ENZYME HGICII	HERPETOSIPHON AURANTIACUS	243-273								
P7I9I_DESDN	TYPE II RESTRICTION ENZYME DDEI	DESULFOVIBRIO DESULFURICANS	85-122								
P7I9I_STRPN	TYPE II RESTRICTION ENZYME DPNI	STREPTOCOCCUS PNEUMONIAE	213-240								
P7I9I_ECOLI	TYPE II RESTRICTION ENZYME ECORI	ESCHERICHIA COLI	2-29								
P7I9J_ECOLI	TYPE II RESTRICTION ENZYME ECORII	ESCHERICHIA COLI	333-360								
P7I9J_ECOLI	TYPE II RESTRICTION ENZYME ECORV	ESCHERICHIA COLI	128-155	214-241							
P7I9F1_FLAOK	TYPE IIS RESTRICTION ENZYME FOKI	FLAVOBACTERIUM OKEANOKOITES	302-336								
P7I9II_HAEIN	TYPE II RESTRICTION ENZYME HINFI	HAEMOPHILUS INFLUENZAE	6-38	69-96							
P7I9II_HAEPA	TYPE II RESTRICTION ENZYME HPAI	HAEMOPHILUS PARAINFLUENZAE	77-125								
P7I9I2_HAEHA	TYPE II RESTRICTION ENZYME HHAII	HAEMOPHILUS HAEMOLYTICUS	23-50								
P7I9I2_HAEIN	TYPE II RESTRICTION ENZYME HINCII	HAEMOPHILUS INFLUENZAE	97-138								
P7I9K1_KLEPN	TYPE II RESTRICTION ENZYME KPNI	KLEBSIELLA PNEUMONIAE	18-45	178-205							
P7I9M1_MORBO	TYPE II RESTRICTION ENZYME MBOI	MORAXELLA BOVIS	15-61	187-215	225-252						
P7I9N2_MORBO	TYPE IIS RESTRICTION ENZYME MBOII	MORAXELLA BOVIS	3-30	158-185	337-364						
P7I9Z_METTF	POSSIBLE TYPE II RESTRICTION ENZYME MTHZI	METHANOBACTERIUM THERMOFORMICICUM	105-151								
P7I9Q_NEIGO	TYPE II RESTRICTION ENZYME NGOPII	NEISSERIA GONORRHOEAE	117-144	231-258							
P7I9S1_STRSA	TYPE II RESTRICTION ENZYME STSI	STREPTOCOCCUS SANGUIS	3-32	41-68	395-446						
P7I9S2_SHISO	TYPE II RESTRICTION ENZYME SSOII	SHIGELLA SONNEI	208-243	258-288							
P7I9S3_STAAU	TYPE II RESTRICTION ENZYME SAUI3AI	STAPHYLOCOCCUS AUREUS	70-102								
P7I9S_SALIN	TYPE II RESTRICTION ENZYME SINI	SALMONELLA INFANTIS	144-181								
P7I9M_SERMA	TYPE II RESTRICTION ENZYME SMAI	SERRATIA MARCESCENS	61-88								
P7I9A_THEAQ	TYPE II RESTRICTION ENZYME TAQI	THERMUS AQUATICUS	147-181	203-237							
P7I9O_ECOLI	SYSTEM ECOP15 ENZYME MOD	ESCHERICHIA COLI	37-71	75-102	226-296	378-405					
P7I9E_BACCE	SYSTEM ENZYME RES	BACILLUS CEREUS	62-89	236-283							

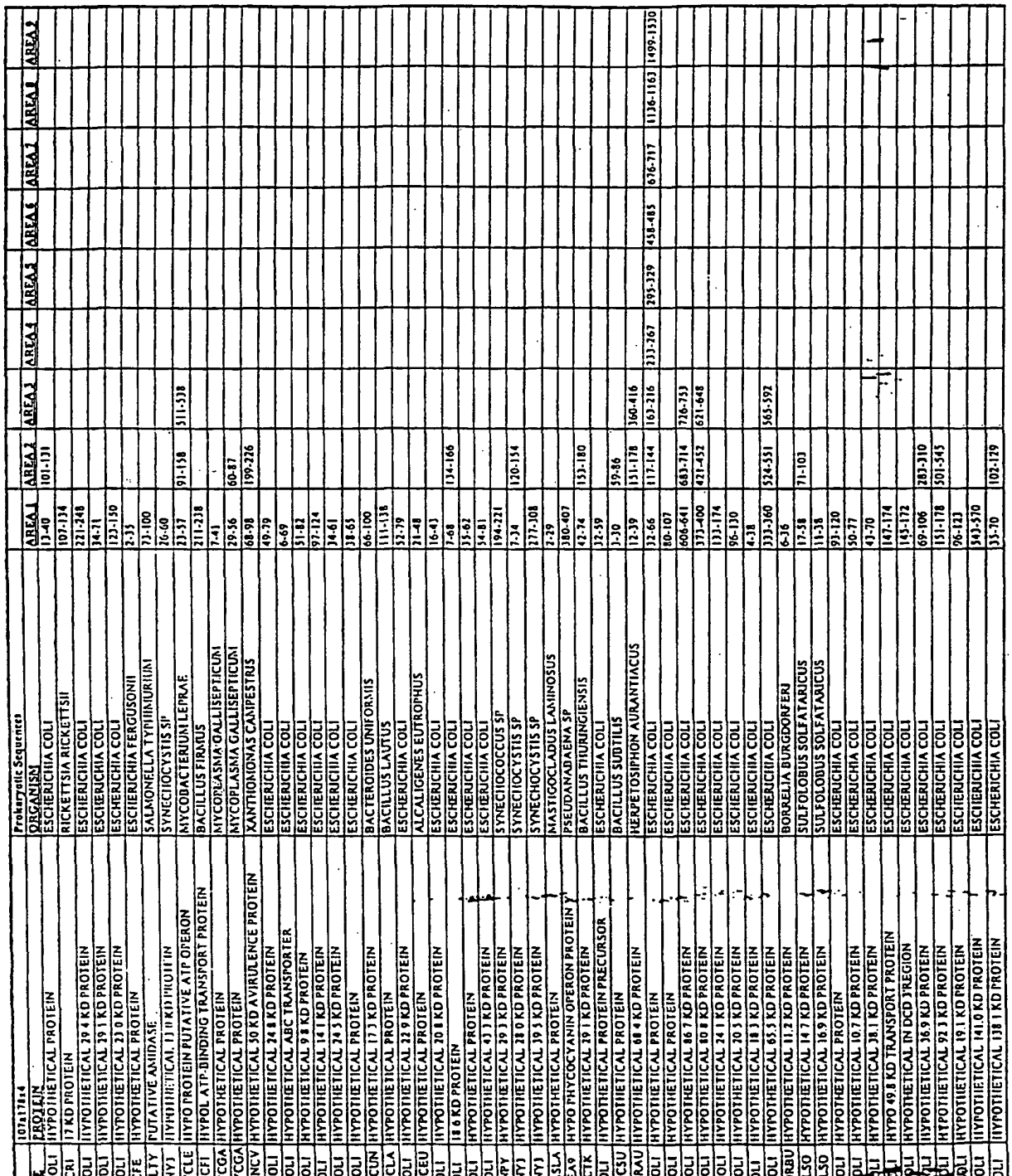
#CGENE	107a17844	Prokaryotic Sequences								
GENENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTA47_TREPA	47 KD MEMBRANE ANTIGEN PRECURSOR	TREPONEMA PALLIDUM	26-53								
PTA53_TREDE	53 KD MEMBRANE ANTIGEN A PRECURSOR	TREPONEMA DENTICOLA	99-126	298-329							
PTACY_BACAL	ALVEOLYSIN PRECURSOR	BACILLUS ALVEI	272-302	374-401							
PTACY_CLOPE	PERFRINGOLYSIN O PRECURSOR	CLOSTRIDIUM PERFRINGENS	270-311	372-434							
PTACY_LISIV	IVANOLYSIN PRECURSOR	LISTERIA IVANOVII	91-120	167-195	396-423						
PTACY_LISMO	LISTERIOLYSIN O PRECURSOR	LISTERIA MONOCYTOGENES	98-125	168-196	295-329	397-424					
PTACY_LISSE	SEELIGERIOLYSIN PRECURSOR	LISTERIA SEELIGERI	99-126	298-323	349-376	398-463					
PTACY_STRPN	PNEUMOLYSIN	STREPTOCOCCUS PNEUMONIAE	234-272								
PTACY_STRPY	STREPTOLYSIN O PRECURSOR	STREPTOCOCCUS PYOGENES	86-133	335-382	440-470						
PTAGB_BACSU	TECHOIC ACID BIOSYN PROTEIN B PREC	BACILLUS SUBTILIS	42-69								
PTAGC_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN C	BACILLUS SUBTILIS	140-375								
PTAGE_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN E	BACILLUS SUBTILIS	59-93	144-181	185-243	565-592	600-627				
PTAGF_BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN F	BACILLUS SUBTILIS	182-209								
PTBP1_NEIGO	TRANSFERRIN-BINDING PROTEIN 1 PRECURSOR	NEISSERIA GONORRHOEAE	39-73	137-164	398-425	810-841					
PTBUD_PSEPI	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS PICKETTII	38-65	227-254	375-402						
PTCDT_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN TCDT	SALMONELLA TYPHIMURIUM	105-132								
PTCPC_VIBCH	MEMBRANE PROTEIN TCPC PRECURSOR	VIBRIO CHOLERAE	20-47	83-128	199-233	263-290	344-375	459-486			
PTCPE_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPE	VIBRIO CHOLERAE	24-59	97-111							
PTCPF_VIBCH	TCP PILUS SECRETION PROTEIN TCPF	VIBRIO CHOLERAE	32-66	211-238							
PTCPH_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPH	VIBRIO CHOLERAE	95-122								
PTCPI_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPI	VIBRIO CHOLERAE	23-52	234-261	279-306	346-379					
PTCPN_VIBCH	TCP PILUS VIRULENCE REGULATORY PROTEIN	VIBRIO CHOLERAE	48-75								
PTCPO_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPO	VIBRIO CHOLERAE	210-237								
PTCPY_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPY	VIBRIO CHOLERAE	121-148								
PTCPZ_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPZ	VIBRIO CHOLERAE	44-85								
PTCR2_BACSU	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS SUBTILIS	404-434								
PTCR_BACST	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS STEAROTHERMOPHILUS	422-453								
PTCR_STAAU	TETRACYCLINE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	404-431								
PTCR_STRAG	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS AGALACTIAE	422-453								
PTCR_STRPN	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS PNEUMONIAE	422-453								
PTDCA_ECOLI	TDCABC OPERON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	210-239								
PTDCC_ECOLI	TDCC PROTEIN	ESCHERICHIA COLI	334-361								
PTEE6_STRPY	TRYPSIN-RESIST SURFACE T6 PROTEIN PREC	STREPTOCOCCUS PYOGENES	137-164	361-393	400-437						
PTER1_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS B	ESCHERICHIA COLI	8-36								
PTER4_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS D	ESCHERICHIA COLI	183-210								
PTERA_ALCSP	TELLURIUM RESISTANCE PROTEIN TERA	ALCALIGENES SP	48-86								
PTESB_ECOLI	ACYL-COA THIOESTERASE II	ESCHERICHIA COLI	4-31								
PTET3_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TET(M)	ENTEROCOCCUS FAECALIS	2-36	130-159	179-206	217-244					
PTET9_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TET(L)	ENTEROCOCCUS FAECALIS	2-36	130-159	217-244	260-287					
PTETC_ECOLI	TRANSPOSON TN10 TETC PROTEIN	ESCHERICHIA COLI	72-106	116-158							
PTETM_STRLI	TETRACYCLINE RESISTANCE PROTEIN	STREPTOMYCES LIVIDANS	82-109								
PTETM_UREUR	TETRACYCLINE RESISTANCE PROTEIN TET(M)	UREAPLASMA UREALYTICUM	2-36	130-159	217-244	260-287					
PTETO_CAMCO	TETRACYCLINE RESISTANCE PROTEIN TET(O)	CAMPYLOBACTER COLI	2-29								
PTETO_CAMJE	TETRACYCLINE RESISTANCE PROTEIN TET(O)	CAMPYLOBACTER JEJUNI	2-36								
PTETO_STRMU	TETRACYCLINE RESISTANCE PROTEIN TET(O)	STREPTOCOCCUS MUTANS	2-29								
PTETX_BACFR	TETRACYCLINE RESISTANCE PROTEIN	BACTEROIDES FRAGILIS	33-62								
PTETX_CLOTE	TETANUS TOXIN PRECURSOR	CLOSTRIDIUM TETANI	274-304	340-367	615-642	692-719	985-1012	1240-1277			
PTF1B_PYRWO	TRANS INITIATION FACTOR IIB HOMOLOG	PYROCOCCUS WOESEI	216-258								
PTFDC_ALCEU	CHLOROCATECHOL 1,2-DIOXYGENASE	ALCALIGENES EUTROPHUS	2-33								
PTGT_ECOLI	QUEUINE TRNA-RIBOSYLTRANSFERASE	ESCHERICHIA COLI	173-200								
PTHD1_LACLA	THREONINE DEHYDRATASE BIOSYNTHETIC	LACTOCOCCUS LACTIS	267-303								
PTHD2_ECOLI	THREONINE DEHYDRATASE CATABOLIC	ESCHERICHIA COLI	293-320								
PTHDF_BACSU	FURAN OXIDATION PROTEIN THDF	BACILLUS SUBTILIS	153-180	192-226	282-316	391-418					
PTHDF_ECOLI	FURAN OXIDATION PROTEIN THDF	ESCHERICHIA COLI	226-260	404-431							
PTHDF_PSEPU	FURAN OXIDATION PROTEIN THDF	PSEUDOMONAS PUTIDA	226-260								
PTHER_BACCE	THERMOLYSIN	BACILLUS CEREUS	4-38	240-267							
PTHER_BACST	THERMOLYSIN PRECURSOR	BACILLUS STEAROTHERMOPHILUS	43-72								

PGENE	107a17814	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM									
PTHER_BACTH	THERMOLYSIN	BACILLUS THERMOPROTEOLYTICUS	86-113								
PTHET_THEVU	THERMITASE	THERMOACTINOMYCES VULGARIS	131-161								
PTHIC_ECOLI	THIC PROTEIN	ESCHERICHIA COLI	232-263	301-328							
PTHIG_ECOLI	THIG PROTEIN	ESCHERICHIA COLI	138-165								
PTHOS_SULAC	THERMOPSIN PRECURSOR	SULFOLOBUS ACIDOCALDARIUS	115-172	199-233							
PTHRC_BRELA	THREONINE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	288-315								
PTHTR_SACER	PUTATIVE THIOSULFATE SULFURTRANSFERASE	SACCHAROPOLYSPORA ERYTHRAEA	69-96								
PTIG_ECOLI	TRIGGER FACTOR	ESCHERICHIA COLI	144-171								
PTKPA_TREPA	TREPONEMAL MEMBRANE PROTEIN A PRECURSOR	TREPONEMA PALLIDUM	216-266								
PTKPB_TREPA	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PALLIDUM	44-71								
PTKPB_TREPH	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PHAGEDENIS	41-68								
PTNAB_ECOLI	LOW AFFINITY TRYPTOPHAN PERMEASE	ESCHERICHIA COLI	74-108								
PTNP4_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	32-79	122-149							
PTNP7_ENTFA	TRANSPOSON TN917 RESOLVASE	ENTEROCOCCUS FAECALIS	59-97	111-138							
PTNPA_STAAU	TRANSPOSASE A	STAPHYLOCOCCUS AUREUS	131-178								
PTNPB_STAAU	TRANSPOSASE B	STAPHYLOCOCCUS AUREUS	589-625								
PTNPI_BACTU	TNP I RESOLVASE	BACILLUS THURINGIENSIS	7-62	63-93	174-201						
PTNSB_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSB	ESCHERICHIA COLI	99-126	510-537							
PTNSC_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSC	ESCHERICHIA COLI	33-59	314-341							
PTNSD_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSD	ESCHERICHIA COLI	339-366								
PTNSE_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSE	ESCHERICHIA COLI	463-490								
PTOD1_PSEPU	TOLUENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PTOD2_PSEPU	TOLUENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PTODA_PSEPU	TOLUENE 1,2-DIOXYGENASE SYSTEM	PSEUDOMONAS PUTIDA	179-213								
PTODJ_PSEPU	TODF PRODUCT HYDRATASE	PSEUDOMONAS PUTIDA	143-170								
PTOLA_ECOLI	TOLA PROTEIN	ESCHERICHIA COLI	101-128								
PTOLC_ECOLI	OUTER MEMBRANE PROTEIN TOLC PRECURSOR	ESCHERICHIA COLI	144-178	184-211	239-266	348-375	383-443				
PTOP1_SYNP7	DNA TOPOISOMERASE I	SYNECHOCOCCUS SP	203-230								
PTORA_ECOLI	TRIMETHYLAMINE-N-OXIDE REDUCTASE	ESCHERICHIA COLI	797-824								
PTOX1_BORPE	PERTUSSIS TOXIN SUBUNIT 1 (S1) PRECURSOR	BORDETELLA PERTUSSIS	179-206								
PTOX2_BORPE	PERTUSSIS TOXIN SUBUNIT 2 (S2) PRECURSOR	BORDETELLA PERTUSSIS	38-85								
PTOXA_CLODI	TOXIN A	CLOSTRIDIUM DIFFICILE	20-88	99-159	204-231	342-369	373-414	847-962	966-994	997-1024	1348-1402
PTOXA_PSEAE	EXOTOXIN A PRECURSOR	PSEUDOMONAS AERUGINOSA	470-497								
PTOXB_CLODI	TOXIN B	CLOSTRIDIUM DIFFICILE	38-72	133-163	199-241	825-869	923-950	1334-1388	1403-1433	1506-1565	1716-1747
PTOXS_VIBCH	TRANSMEMBRANE REGULATORY PROTEIN TOXS	VIBRIO CHOLERAE	13-40								
PTPF1_TREPA	ANTIGEN TPF1	TREPONEMA PALLIDUM	106-143								
PTPIS_ECOLI	TRIOSEPHOSPHATE ISOMERASE	ESCHERICHIA COLI	83-110								
PTPIS_MORSP	TRIOSEPHOSPHATE ISOMERASE	MORAXELLA SP	139-166								
PTPR_PORGI	THIOL PROTEASE PRECURSOR	PORPHYROMONAS GINGIVALIS	117-144								
PTRJM_AGRT3	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTRJM_AGRT4	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTRJM_PSESS	TRYPTOPHAN 2-MONOOXYGENASE	PSEUDOMONAS SYRINGAE	41-68								
PTRA1_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	58-113								
PTRA2_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	11-38	58-113							
PTRA3_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	721-755								
PTRA3_RHIME	TRANSPOSASE	RHIZOBIUM MELILOTI	179-206								
PTRA3_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	33-60	68-95							
PTRA4_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	181-208	308-340	720-754						
PTRA6_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	51-78								
PTRA6_SHIFL	TRANSPOSASE	SHIGELLA SONNEI	51-78	200-227	231-258						
PTRA7_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	729-756								
PTRA9_MYCTU	PUTATIVE TRANSPOSASE	MYCOBACTERIUM TUBERCULOSIS	139-186								
PTRAB_BACTB	IS231B PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_BACTB	IS231C PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	4-31	43-72							
PTRAX_BACTB	IS231 PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRA_BACTU	TRANSPOSASE	BACILLUS THURINGIENSIS	93-127	509-539							

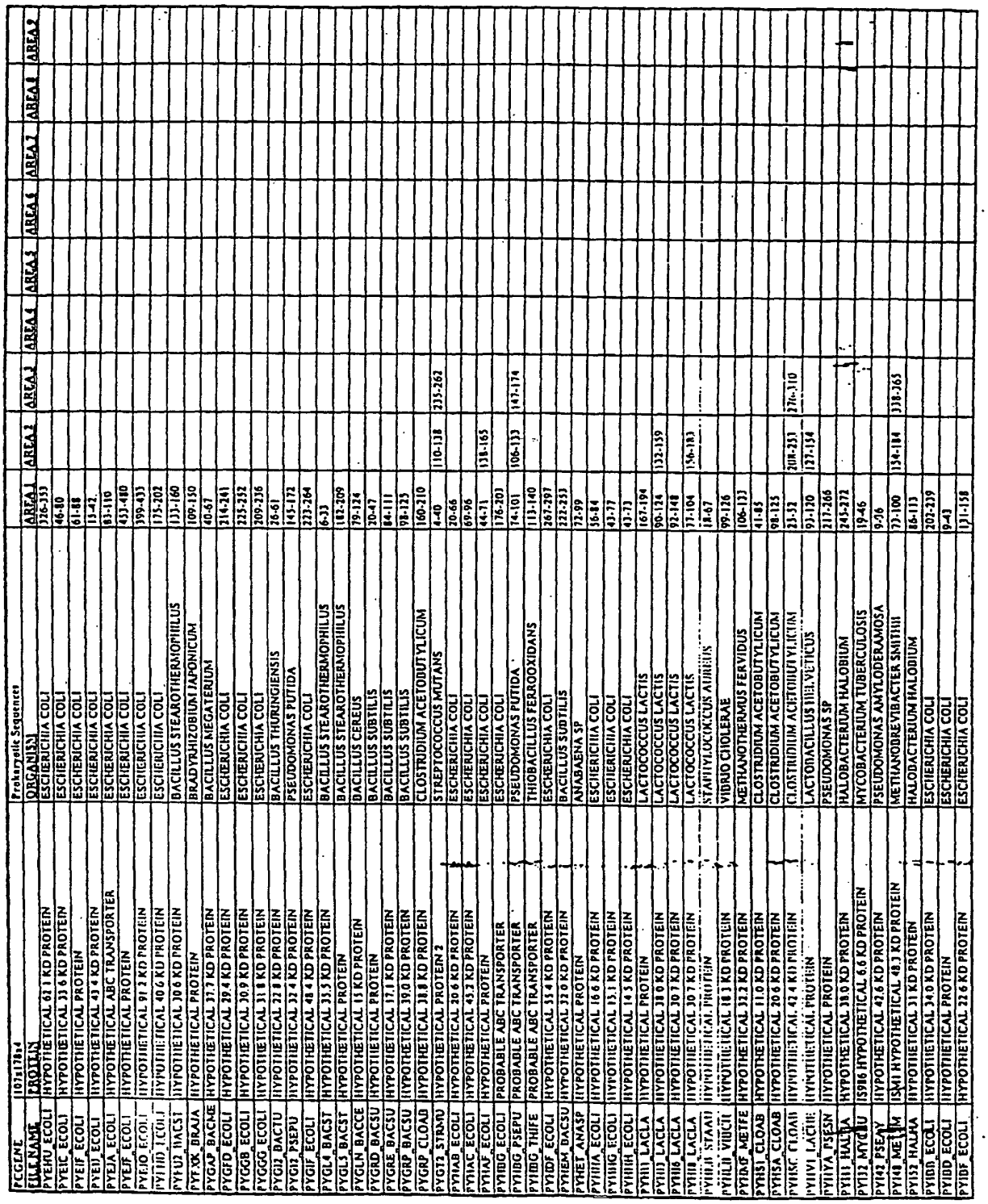
PCGENE	19741Bit	Prokaryotic Sequences		AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM										
PTRA_PSEAE	TRANSPOSASE	PSEUDOMONAS AERUGINOSA		127-134	721-733							
PTRB1_ECOLI	TRAB PROTEIN	ESCHERICHIA COLI		113-143								
PTRBF_ECOLI	TRBF PROTEIN	ESCHERICHIA COLI		12-39								
PTRBI_ECOLI	TRBI PROTEIN	ESCHERICHIA COLI		70-97								
PTRC1_ECOLI	TRAC-1 PROTEIN	ESCHERICHIA COLI		1006-1058								
PTRC2_ECOLI	TRAC-2 PROTEIN	ESCHERICHIA COLI		1102-1149								
PTRCJ_ECOLI	TRAC-J PROTEIN	ESCHERICHIA COLI		884-931								
PTRD1_ECOLI	TRAD PROTEIN	ESCHERICHIA COLI		297-348								
PTREA_ECOLI	PERIPLASMIC TREHALASE PRECURSOR	ESCHERICHIA COLI		362-403	477-508							
PTREC_ECOLI	ANYLOTREHALASE	ESCHERICHIA COLI		280-307								
PTRFA_ECOLI	TRFA TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI		5-32	105-132							
PTRG1_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI		61-88	630-657	831-858	865-895					
PTRGJ_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI		196-223								
PTRG6_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI		193-222	318-345							
PTRI1_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI		135-209	597-624	887-914	(1350-1377					
PTRIJ_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI		135-209	597-624	887-914	(1350-1377					
PTRJ1_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI		47-74	328-371							
PTRJ4_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI		36-63								
PTRJ8_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI		5-32								
PTRNA_ECOLI	TRNA (URACIL-5-)-METHYLTRANSFERASE	ESCHERICHIA COLI		107-137								
PTRYD_ECOLI	TRNA (GUANINE-N1)-METHYLTRANSFERASE	ESCHERICHIA COLI		115-142	226-253							
PTRPA_BACSU	TRYPTOPHAN SYNTHASE ALPHA CHAIN	BACILLUS SUBTILIS		220-247								
PTRPA_CAUCR	TRYPTOPHAN SYNTHASE ALPHA CHAIN	CAULOBACTER CRESCENTUS		241-275								
PTRPA_PSEAE	TRYPTOPHAN SYNTHASE ALPHA CHAIN	PSEUDOMONAS AERUGINOSA		176-203								
PTRPD_ACICA	TRYPTOPHAN SYNTHASE BETA CHAIN	ACINETOBACTER CALCOACETICUS		79-113								
PTRPB_BACSU	TRYPTOPHAN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS		76-103	318-345							
PTRPB_BRELA	TRYPTOPHAN SYNTHASE BETA CHAIN	BREVIBACTERIUM LACTOFERMENTUM		132-199								
PTRPB_LACCA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOBACILLUS CASEI		83-117								
PTRPB_LACLA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOCOCCUS LACTIS		77-104	164-191							
PTRPD_VIBPA	TRYPTOPHAN SYNTHASE BETA CHAIN	VIBRIO PARAHAEMOLYTICUS		56-83								
PTRPC_BRELA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM		229-256								
PTRPC_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	ESCHERICHIA COLI		205-232								
PTRPC_LACLA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	LACTOCOCCUS LACTIS		148-175								
PTRPC_VIBPA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	VIBRIO PARAHAEMOLYTICUS		346-376								
PTRPD_ACICA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	ACINETOBACTER CALCOACETICUS		223-250	266-294							
PTRPD_PSEAE	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS AERUGINOSA		205-232								
PTRPD_PSEPU	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS PUTIDA		205-232								
PTRPD_VIBPA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	VIBRIO PARAHAEMOLYTICUS		2-29								
PTRPE_BACPU	ANTHRANILATE SYNTHASE COMPONENT I	BACILLUS PUMILUS		33-60								
PTRPE_CLOTH	ANTHRANILATE SYNTHASE COMPONENT I	CLOSTRIDIUM THERMOCELLUM		165-226								
PTRPE_LACLA	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS		142-191								
PTRPE_LEPIN	ANTHRANILATE SYNTHASE COMPONENT I	LEPTOSPIRA INTERROGANS		145-179								
PTRPE_RHIME	ANTHRANILATE SYNTHASE	RHIZOBIUM MELILOTI		139-166								
PTRPE_SALTY	ANTHRANILATE SYNTHASE COMPONENT I	SALMONELLA TYPHIMURIUM		191-218								
PTRPE_SULSO	ANTHRANILATE SYNTHASE COMPONENT I	SULFOLOBUS SOLFATARICUS		140-183	298-328							
PTRPE_VIBPA	ANTHRANILATE SYNTHASE COMPONENT I	VIBRIO PARAHAEMOLYTICUS		9-36	54-81							
PTRPG_ACICA	ANTHRANILATE SYNTHASE COMPONENT II	ACINETOBACTER CALCOACETICUS		12-39								
PTRPG_AZOBR	ANTHRANILATE SYNTHASE COMPONENT II	AZOSPIRILLUM BRASILENSE		4-31								
PTRPG_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	ESCHERICHIA COLI		5-32								
PTRPG_LACLA	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS		4-31								
PTRPG_PSEAE	ANTHRANILATE SYNTHASE COMPONENT II	PSEUDOMONAS AERUGINOSA		12-39								
PTRPG_SALTY	ANTHRANILATE SYNTHASE COMPONENT II	SALMONELLA TYPHIMURIUM		5-32								
PTRPG_SERMA	ANTHRANILATE SYNTHASE COMPONENT II	SERRATIA MARCESCENS		9-43								
PTRPG_SHIDY	ANTHRANILATE SYNTHASE COMPONENT II	SHIGELLA DYSENTERIAE		5-32								
PTRPO_PSEAE	PUTATIVE TRANSCRIPTIONAL REGULATOR	PSEUDOMONAS AERUGINOSA		147-174								
PTRS1_ECOLI	TRAS PROTEIN	ESCHERICHIA COLI		85-119								
PTRT1_ECOLI	RESISTANCE PROTEIN PRECURSOR	ESCHERICHIA COLI		184-221								

PCGENE	107117814	Prokaryotic Sequences	AREA1	AREA2	AREA2	AREA1	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	ORGANISM								
PTRY1_SALTY	TRAY PROTEIN	SALMONELLA TYPHIMURIUM	30-57							
PTRYP_STRGR	TRYPSIN PRECURSOR	STREPTOMYCES GRISEUS	86-107							
PTSR_STRAZ	RNNA METHYLTRANSFERASE	STREPTOMYCES AZUREUS	126-153							
PTSST_STAAU	TOXIC SHOCK SYNDROME TOXIN-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	29-63	102-129						
PTSX_ECOLI	CHANNEL-FORMING PROTEIN TSX PRECURSOR	ESCHERICHIA COLI	225-252							
PTTK_ECOLI	HYPOTHETICAL 24 3 KD PROTEIN	ESCHERICHIA COLI	81-115							
PTUS_ECOLI	SITE-BINDING PROTEIN	ESCHERICHIA COLI	57-91	107-134						
PTYCA_BACBR	TYROCIDINE SYNTHETASE I	BACILLUS BREVIS	117-147	534-561	1019-1051					
PTYF1_TREPE	ANTIGEN TYF1	TREPONEMA PERTENUE	106-143							
PTYRA_BACSU	POSSIBLE PREPHENATE DEHYDROGENASE	BACILLUS SUBTILIS	244-271	312-342						
PTYRA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	329-370							
PTYRR_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN TYRR	ESCHERICHIA COLI	483-510							
PTYSY_LACCA	THYMIDYLATE SYNTHASE	LACTOBACILLUS CASEI	139-173							
PTYSY_LACLA	THYMIDYLATE SYNTHASE	LACTOCOCCUS LACTIS	75-109							
PTYSY_STAAU	THYMIDYLATE SYNTHASE	STAPHYLOCOCCUS AUREUS	69-96							
PUIPB_ECOLI	SENSOR PROTEIN UHPB	ESCHERICHIA COLI	276-303	316-343						
PUIPB_SALTY	SENSOR PROTEIN UHPB	SALMONELLA TYPHIMURIUM	276-303	316-343						
PUMUC_SALTY	UMUC PROTEIN	SALMONELLA TYPHIMURIUM	204-231							
PUPP_ECOLI	URACIL PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	30-57							
PURAA_ECOLI	URACIL PERMEASE	ESCHERICHIA COLI	350-384							
PUREI_HELPY	UREASE ALPHA SUBUNIT	HELICOBACTER PYLORI	13-42							
PUREI_PROMI	UREASE ALPHA SUBUNIT	PROTEUS MIRABILIS	72-99							
PUREI_PROVU	UREASE ALPHA SUBUNIT	PROTEUS VULGARUS	72-99							
PUREI_UREUR	UREASE ALPHA SUBUNIT	UREAPLASMA UREALYTICUM	13-40	483-517						
PUREJ_HELPY	UREASE BETA SUBUNIT	HELICOBACTER PYLORI	62-99							
PURED_HELPY	UREASE OPERON URED PROTEIN	HELICOBACTER PYLORI	17-44							
PUREE_PROMI	UREASE ACCESSORY PROTEIN UREE	PROTEUS MIRABILIS	57-84							
PUREF_KLEAE	UREASE ACCESSORY PROTEIN UREF PRECURSOR	KLEBSIELLA AEROGENES	20-47							
PUS43_LACLA	SECRETED 43 KD PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	44-98	150-223	276-303					
PUSHA_ECOLI	P-SUGAR HYDROLASE PRECURSOR	ESCHERICHIA COLI	56-83							
PUSHA_SALTY	SILENT PROTEIN USHA(0) PRECURSOR	SALMONELLA TYPHIMURIUM	36-83							
PUVRA_ECOLI	EXCINUCLEASE ABC SUBUNIT A	ESCHERICHIA COLI	537-554	871-898						
PUVRA_MICLU	EXCINUCLEASE ABC SUBUNIT A	MICROCOCCUS LUTEUS	579-606	619-646	684-718	922-949				
PUVRA_PARDE	EXCINUCLEASE ABC SUBUNIT A	PARACOCCUS DENITRIFICANS	33-60							
PUVRC_BACSU	EXCINUCLEASE ABC SUBUNIT C	BACILLUS SUBTILIS	342-372	511-538						
PUVRC_ECOLI	EXCINUCLEASE ABC SUBUNIT C	ESCHERICHIA COLI	37-64	332-362						
PUVRD_ECOLI	HELICASE II	ESCHERICHIA COLI	280-307							
PVANA_ENTFC	VANCOMYCIN RESISTANCE PROTEIN VANA	ENTEROCOCCUS FAECIUM	182-209							
PVANC_ENTGA	VANCOMYCIN RESISTANCE PROTEIN VANC	ENTEROCOCCUS GALLINARUM	173-211							
PVIB4_AGRT5	VIRB4 PROTEIN PRECURSOR	AGROBACTERIUM TUMEFACIENS	138-172							
PVIB6_AGRT5	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227							
PVIB6_AGRT6	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227							
PVIB6_AGRT9	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227							
PVIBX_AGRT5	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239						
PVIBX_AGRT6	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	211-238						
PVIBX_AGRT9	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239						
PVIC1_AGRRA	VIRC1 PROTEIN	AGROBACTERIUM RHIZOGENES TUMEFACIENS	81-108							
PVIC1_AGRT5	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108							
PVIC1_AGRT6	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108							
PVID2_AGRRA	VIRD2 PROTEIN	AGROBACTERIUM RHIZOGENES	149-176	265-292						
PVIRA_AGRT5	WIDE HOST RANGE (WIR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-76	111-147	657-684					
PVIRA_AGRT6	WIDE HOST RANGE (WIR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680					
PVIRA_AGRTP	WIDE HOST RANGE (WIR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680					
PVIRB_SHIFL	VIRB TRANSCRIPTIONAL ACTIVATOR	SHIGELLA FLEXNERI	37-71	107-134	187-214	252-291				
PVIRF_YEREN	VIRULENCE REGULON TRANSACTIVATOR	YERSINIA ENTEROCOLITICA	16-46							
PVIRG_AGRRA	VIRG REGULATORY PROTEIN	AGROBACTERIUM RHIZOGENES	34-61							
PVIRL_AGRT6	LIMITED HOST RANGE (LIR) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	106-137							

PCGENE	10111314	Prokaryotic Sequences	AREA1	AREA1	AREA1	AREA2	AREA2	AREA2	AREA2	AREA2
FILE NAME	PROTEIN	ORGANISM	47-74							
PVISC_ECOLI	VISC PROTEIN	ESCHERICHIA COLI								
PVLPA_MYCHR	VARIANT SURFACE ANTIGEN A PRECURSOR	MYCOPLASMA HYORHINIS	74-112							
PVN01_BORJE	OUTER MEMBRANE LIPOPROTEIN 1 PRECURSOR	BORRELIA HERMSII	54-81							
PVN07_BORJE	OUTER MEMBRANE LIPOPROTEIN 7 PRECURSOR	BORRELIA HERMSII	332-359							
PVN11_BORJE	OUTER MEMBRANE LIPOPROTEIN 11 PRECURSOR	BORRELIA HERMSII	330-357							
PVN24_BORJE	OUTER MEMBRANE LIPOPROTEIN 24 PRECURSOR	BORRELIA HERMSII	47-143							
PVN25_BORHE	OUTER MEMBRANE LIPOPROTEIN 25 PRECURSOR	BORRELIA HERMSII	315-336							
PVNFA_AZOVI	NITROGEN FIXATION PROTEIN VNFA	AZOTOBACTER VINELANDII	158-188	218-245						
PVNFK_AZOVI	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	68-95	372-403						
PVRP1_SALCH	61 KD VIRULENCE PROTEIN	SALMONELLA CHOLERAE-SUIS	509-536							
PVRP1_SALDU	61 KD VIRULENCE PROTEIN	SALMONELLA DUBLIN	311-338							
PVSDE_SALDU	VIRULENCE PROTEIN VSDE	SALMONELLA DUBLIN	3-36							
PVVHB_VIBVU	CYTOLYSIN SECRETION PROTEIN	VIBRIO VULNIFICUS	30-73							
PWARA_STRMU	WALL-ASSOCIATED PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	4-41	313-386						
PWRBA_ECOLI	TRP REPRESSOR BINDING PROTEIN	ESCHERICHIA COLI	89-116							
PX191_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131							
PX192_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131							
PX193_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131							
PXISA_ANASP	EXCISASE A	ANABAENA SP	4-31	89-116	135-162					
PXPRB_ECOLI	POSSIBLE INTEGRASE/RECOMBINASE XPRB	ESCHERICHIA COLI	268-295							
PXYLA_STAXY	XYLOSE ISOMERASE	STAPHYLOCOCCUS XYLOSUS	411-438							
PXYLK_KLEAE	XYLULOSE KINASE	KLEBSIELLA AEROGENES	2-29							
PXYLK_LACPE	XYLULOSE KINASE	LACTOBACILLUS PENTOSUS	52-79	211-238	260-287					
PXYLK_STAXY	XYLULOSE KINASE	STAPHYLOCOCCUS XYLOSUS	4-31	96-130	209-236	246-273				
PXYLR_BACSU	XYLOSE REPRESSOR	BACILLUS SUBTILIS	75-102	260-287						
PXYLR_LACPE	XYLOSE REPRESSOR	LACTOBACILLUS PENTOSUS	263-289							
PXYLR_STAXY	XYLOSE REPRESSOR	STAPHYLOCOCCUS XYLOSUS	20-64	101-138	181-215	221-255	274-301			
PXYLZ_PSEPU	ELECTRON TRANSFER COMPONENT	PSEUDOMONAS PUTIDA	51-78	104-131						
PXYN4_CALSA	PUTATIVE ENDO-1,4-BETA-XYLANASE	CALDOCELLUM SACCHAROLYTICUM	198-225							
PXYNA_BACCI	D-1,4-BETA-XYLANASE PRECURSOR	BACILLUS CIRCULANS	47-74							
PXYNA_BACSS	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SP	173-200							
PXYNA_BACSU	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SUBTILIS	47-74							
PXYNA_CALSA	ENDO-1,4-BETA-XYLANASE A PRECURSOR	CALDOCELLUM SACCHAROLYTICUM	132-159	226-256						
PXYNA_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	33-62							
PXYNB_BACPU	BETA-XYLOSIDASE	BACILLUS PUMILUS	459-486							
PXYNB_CALSA	BETA-XYLOSIDASE	CALDOCELLUM SACCHAROLYTICUM	440-474							
PXYNB_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	231-258	317-344	475-502				
PXYNC_PSEFL	ALPHA-L-ARABINOFURANOSIDASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	231-258						
PXYNC_STRLI	ENDO-1,4-BETA-XYLANASE C PRECURSOR	STREPTOMYCES LIVIDANS	183-210							
PY14K_HALMO	HYPOTHETICAL 14.9 KD PROTEIN	HALOCOCCUS MORRHUAE	56-83							
PY23K_STRGR	HYPOTHETICAL 23.1 KD PROTEIN	STREPTOCOCCUS ORALIS	78-105							
PY36K_METSM	HYPOTHETICAL 36.7 KD PROTEIN	METHANOBREVIDACTER SMITHII	128-162	173-218						
PYAAC_ECOLI	HYPOTHETICAL 34.6 KD PROTEIN	ESCHERICHIA COLI	271-298							
PYAAC_PSEFL	HYPOTHETICAL 33.9 KD PROTEIN	PSEUDOMONAS FLUORESCENS	274-301							
PYAAM_ECOLI	HYPOTHETICAL 39.1 KD PROTEIN	ESCHERICHIA COLI	45-72							
PYAAP_ECOLI	HYPOTHETICAL 56.6 KD PROTEIN	ESCHERICHIA COLI	332-379							
PYAAQ_ECOLI	HYPOTHETICAL 28.3 KD PROTEIN	ESCHERICHIA COLI	155-182							
PYADC_ECOLI	HYPOTHETICAL 34.9 KD PROTEIN	ESCHERICHIA COLI	131-158							
PYABG_ECOLI	HYPOTHETICAL 69.7 KD PROTEIN	ESCHERICHIA COLI	446-480	627-654						
PYABN_ECOLI	HYPOTHETICAL 63.9 KD PROTEIN	ESCHERICHIA COLI	428-455							
PYAC1_PSEAE	HYPOTHETICAL 23.9 KD PROTEIN	PSEUDOMONAS AERUGINOSA	48-75	150-177						
PYAD2_CLOAB	HYPOTHETICAL 21.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	23-109	114-144						
PYAD5_CLOAB	HYPOTHETICAL 36.9 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	132-159	165-196	210-237					
PYAD6_CLOAB	HYPOTHETICAL PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	31-55							
PYADA_YEREN	INVASIN PRECURSOR	YERSINIA ENTEROCOLITICA	196-230	247-274	318-381					
PYADA_YERPS	INVASIN PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	155-182	297-360						



PCGENE	10?a17?a4	Prokaryotic Sequences	AREA1	AREA2	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	ORGANISM									
PYADC_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	13-40	101-131							
PYAEA_RICRI	17 KD PROTEIN	RICKETTSIA RICKETTSII	107-134								
PYAID_ECOLI	HYPOTHETICAL 39 4 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYAJD_ECOLI	HYPOTHETICAL 39 1 KD PROTEIN	ESCHERICHIA COLI	34-71								
PYAFE_ECOLI	HYPOTHETICAL 23 0 KD PROTEIN	ESCHERICHIA COLI	123-150								
PYAIB_ESCFE	HYPOTHETICAL PROTEIN	ESCHERICHIA FERGUSONII	2-35								
PYANI_SALTY	PUTATIVE AMIDASE	SALMONELLA TYPHIMURIUM	73-100								
PYAII_SYNY3	HYPOTHETICAL 13 0 KD PROTEIN	SYNECHOCYSTIS SP	26-60								
PYATP_MYCLE	HYPO PROTEIN PUTATIVE ATP OPERON	MYCOBACTERIUM LEPRAE	23-57	91-158	311-338						
PYATR_BACFI	HYPOL ATP-BINDING TRANSPORT PROTEIN	BACILLUS FIRMUS	211-238								
PYAT5_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	7-41								
PYATU_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	29-56	60-87							
PYAV3_XANCV	HYPOTHETICAL 30 KD AVIRULENCE PROTEIN	XANTHOMONAS CAMPESTRIS	68-98	199-226							
PYBAH_ECOLI	HYPOTHETICAL 24 8 KD PROTEIN	ESCHERICHIA COLI	49-79								
PYBBA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	6-69								
PYBED_ECOLI	HYPOTHETICAL 9 8 KD PROTEIN	ESCHERICHIA COLI	51-82								
PYBID_ECOLI	HYPOTHETICAL 14 1 KD PROTEIN	ESCHERICHIA COLI	97-124								
PYCAE_ECOLI	HYPOTHETICAL 24 5 KD PROTEIN	ESCHERICHIA COLI	34-61								
PYCBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	38-65								
PYCBL_BACUN	HYPOTHETICAL 17 3 KD PROTEIN	BACTEROIDES UNIFORMIS	66-100								
PYCEA_BACLA	HYPOTHETICAL PROTEIN	BACILLUS LAUTUS	111-138								
PYCFC_ECOLI	HYPOTHETICAL 22 9 KD PROTEIN	ESCHERICHIA COLI	32-79								
PYCHR_ALCEU	HYPOTHETICAL PROTEIN	ALCALIGENES EUTROPHUS	21-48								
PYCIB_ECOLI	HYPOTHETICAL 20 8 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYCIF_ECOLI	18 6 KD PROTEIN	ESCHERICHIA COLI	7-68	134-166							
PYCIK_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	135-162								
PYCL1_ECOLI	HYPOTHETICAL 43 3 KD PROTEIN	ESCHERICHIA COLI	34-81								
PYCPJ_SYNPY	HYPOTHETICAL 29 1 KD PROTEIN	SYNECIOCOCCUS SP	194-221								
PYCPJ_SYNY3	HYPOTHETICAL 28 0 KD PROTEIN	SYNECIOCYSTIS SP	7-34	120-154							
PYCPS_SYNY3	HYPOTHETICAL 39 5 KD PROTEIN	SYNECHOCYSTIS SP	277-308								
PYCPG_MASLA	HYPOTHETICAL PROTEIN	MASTIGOCLADUS LAMINOSUS	2-29								
PYCPY_PSEA9	HYPO PHYCOCYANIN OPERON PROTEIN Y	PSEUDANABAENA SP	380-407								
PYCRJ_BACTK	HYPOTHETICAL 29 1 KD PROTEIN	BACILLUS THURINGIENSIS	42-74	153-180							
PYCS5_ECOLI	HYPOTHETICAL PROTEIN PRECURSOR	ESCHERICHIA COLI	32-59								
PYCW5_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	3-30	59-86							
PYDJM_HERAU	HYPOTHETICAL 68 4 KD PROTEIN	HERPETOSIPHON AURANTIACUS	12-39	131-178	360-416						
PYDDA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	32-66	117-144	163-216	233-267	295-329	458-485	676-717	1136-1163	1499-1530
PYDDD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	80-107								
PYDDB_ECOLI	HYPOTHETICAL 86 7 KD PROTEIN	ESCHERICHIA COLI	606-641	683-714	726-753						
PYDDC_ECOLI	HYPOTHETICAL 80 8 KD PROTEIN	ESCHERICHIA COLI	373-400	421-452	621-648						
PYDDD_ECOLI	HYPOTHETICAL 24 1 KD PROTEIN	ESCHERICHIA COLI	133-174								
PYDEH_ECOLI	HYPOTHETICAL 20 5 KD PROTEIN	ESCHERICHIA COLI	96-130								
PYDEJ_ECOLI	HYPOTHETICAL 18 3 KD PROTEIN	ESCHERICHIA COLI	4-38								
PYDEK_ECOLI	HYPOTHETICAL 65 5 KD PROTEIN	ESCHERICHIA COLI	333-360	524-551	565-592						
PYDNN_BORBU	HYPOTHETICAL 11 2 KD PROTEIN	BORRELIA BURGDORFERI	6-36								
PYDOI_SULSO	HYPOTHETICAL 14 7 KD PROTEIN	SULFOLOBUS SOLFATARICUS	17-58	71-103							
PYDOJ_SULSO	HYPOTHETICAL 16 9 KD PROTEIN	SULFOLOBUS SOLFATARICUS	11-38								
PYEBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	93-120								
PYEBG_ECOLI	HYPOTHETICAL 10.7 KD PROTEIN	ESCHERICHIA COLI	50-77								
PYEEE_ECOLI	HYPOTHETICAL 38.1 KD PROTEIN	ESCHERICHIA COLI	43-70								
PYEEF_ECOLI	HYPO 49.8 KD TRANSPORT PROTEIN	ESCHERICHIA COLI	147-174								
PYEGA_ECOLI	HYPOTHETICAL IN DCD 3'REGION	ESCHERICHIA COLI	143-172								
PYEIA_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	69-106	283-310							
PYEIB_ECOLI	HYPOTHETICAL 92.3 KD PROTEIN	ESCHERICHIA COLI	151-178	501-545							
PYEID_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	96-123								
PYEIF_ECOLI	HYPOTHETICAL 141.0 KD PROTEIN	ESCHERICHIA COLI	543-570								
PYEIII_ECOLI	HYPOTHETICAL 138 1 KD PROTEIN	ESCHERICHIA COLI	33-70	102-129							



PCGENE	10?s178s4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYEHO_ECOLI	HYPOTHETICAL 63.1 KD PROTEIN	ESCHERICHIA COLI	326-353								
PYEIC_ECOLI	HYPOTHETICAL 33.6 KD PROTEIN	ESCHERICHIA COLI	46-80								
PYEIF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	61-88								
PYEIJ_ECOLI	HYPOTHETICAL 43.4 KD PROTEIN	ESCHERICHIA COLI	13-42,								
PYEJA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	83-110								
PYEJF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	433-460								
PYEJO_ECOLI	HYPOTHETICAL 91.2 KD PROTEIN	ESCHERICHIA COLI	399-433								
PYEJQ_ECOLI	HYPOTHETICAL 40.6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYEU2_BACST	HYPOTHETICAL 30.6 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	133-160								
PYF2K_BRAJA	HYPOTHETICAL PROTEIN	BRADYRHIZOBIUM JAPONICUM	109-130								
PYGAP_BACME	HYPOTHETICAL 37.7 KD PROTEIN	BACILLUS MEGATERIUM	40-67								
PYGFD_ECOLI	HYPOTHETICAL 29.4 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYGGB_ECOLI	HYPOTHETICAL 30.9 KD PROTEIN	ESCHERICHIA COLI	225-252								
PYGGG_ECOLI	HYPOTHETICAL 31.8 KD PROTEIN	ESCHERICHIA COLI	209-236								
PYGIJ_BACTU	HYPOTHETICAL 22.8 KD PROTEIN	BACILLUS THURINGIENSIS	26-61								
PYGIJ_PSEPU	HYPOTHETICAL 33.4 KD PROTEIN	PSEUDOMONAS PUTIDA	145-172								
PYGIF_ECOLI	HYPOTHETICAL 48.4 KD PROTEIN	ESCHERICHIA COLI	233-264								
PYGL4_BACST	HYPOTHETICAL 35.5 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	6-33								
PYGL5_BACST	HYPOTHETICAL PROTEIN	BACILLUS STEAROTHERMOPHILUS	182-209								
PYGLN_BACCE	HYPOTHETICAL 15 KD PROTEIN	BACILLUS CEREUS	79-124								
PYGRD_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	20-47								
PYGRE_BACSU	HYPOTHETICAL 17.1 KD PROTEIN	BACILLUS SUBTILIS	84-111								
PYGRP_BACSU	HYPOTHETICAL 39.0 KD PROTEIN	BACILLUS SUBTILIS	98-125								
PYGRP_CLOAB	HYPOTHETICAL 38.8 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	160-210								
PYGT3_STRMU	HYPOTHETICAL PROTEIN 2	STREPTOCOCCUS MUTANS	4-40	110-138	235-262						
PYHAB_ECOLI	HYPOTHETICAL 20.6 KD PROTEIN	ESCHERICHIA COLI	20-66								
PYHAC_ECOLI	HYPOTHETICAL 43.2 KD PROTEIN	ESCHERICHIA COLI	69-96								
PYHAF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	44-71	138-165							
PYHBG_ECOLI	PROBABLE ABC TRANSPORTER	ESCHERICHIA COLI	176-201								
PYHDG_PSEPU	PROBABLE ABC TRANSPORTER	PSEUDOMONAS PUTIDA	74-101	106-133	147-174						
PYHBG_THIFE	PROBABLE ABC TRANSPORTER	THIOBACILLUS FERROOXIDANS	113-140								
PYHDF_ECOLI	HYPOTHETICAL 33.4 KD PROTEIN	ESCHERICHIA COLI	267-297								
PYHEM_BACSU	HYPOTHETICAL 33.6 KD PROTEIN	BACILLUS SUBTILIS	222-253								
PYHET_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	72-99								
PYHHA_ECOLI	HYPOTHETICAL 16.6 KD PROTEIN	ESCHERICHIA COLI	56-84								
PYHHG_ECOLI	HYPOTHETICAL 13.1 KD PROTEIN	ESCHERICHIA COLI	43-77								
PYHHH_ECOLI	HYPOTHETICAL 14.5 KD PROTEIN	ESCHERICHIA COLI	43-73								
PYHI1_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	167-194								
PYHI1_LACLA	HYPOTHETICAL 38.0 KD PROTEIN	LACTOCOCCUS LACTIS	90-124	132-159							
PYHI6_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	92-148								
PYHI8_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	77-104	156-183							
PYHJ1_STAAU	HYPOTHETICAL PROTEIN	STAPHYLOCOCCUS AUREUS	18-47								
PYHJL_VIBCH	HYPOTHETICAL 18.3 KD PROTEIN	VIBRIO CHOLERAE	99-126								
PYHK6_METFE	HYPOTHETICAL 32.2 KD PROTEIN	METHANOTHERMUS FERVIDUS	106-133								
PYHS1_CLOAB	HYPOTHETICAL 11.0 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	41-85								
PYHSA_CLOAB	HYPOTHETICAL 20.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	98-125								
PYHSK_CLOAB	HYPOTHETICAL 47.4 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	23-52	208-237	276-310						
PYHV1_LACDE	HYPOTHETICAL PROTEIN	LACTOBACILLUS DELBRUECKII	93-120	127-154							
PYHYA_PSESN	HYPOTHETICAL PROTEIN	PSEUDOMONAS SP	217-266								
PYI11_HALHA	HYPOTHETICAL 38.0 KD PROTEIN	HALOBACTERIUM HALOBIUM	245-272								
PYI32_MYCBO	I5916 HYPOTHETICAL 6.6 KD PROTEIN	MYCOBACTERIUM TUBERCULOSIS	19-46								
PYI42_PSEAY	HYPOTHETICAL 42.6 KD PROTEIN	PSEUDOMONAS AMYLODERAMOSA	9-36								
PYI4O_METTM	I5MI HYPOTHETICAL 40.3 KD PROTEIN	METHANOBREVIBACTER SMITHII	77-100	134-184	338-365						
PYI52_HALHA	HYPOTHETICAL 31 KD PROTEIN	HALOBACTERIUM HALOBIUM	86-113								
PYIB6_ECOLI	HYPOTHETICAL 34.0 KD PROTEIN	ESCHERICHIA COLI	202-229								
PYID_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	9-43								
PYIDF_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	131-158								

PCGENE	107a17b44	Prabatyolic Sequences									
ID NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYIBO_ECOLI	HYPOTHETICAL 18.1 KD PROTEIN	ESCHERICHIA COLI	70-97								
PYICC_ECOLI	HYPOTHETICAL 33.2 KD PROTEIN	ESCHERICHIA COLI	143-170								
PYICD_ECOLI	HYPOTHETICAL 31.1 KD PROTEIN	ESCHERICHIA COLI	133-159								
PYICH_ECOLI	HYPOTHETICAL 62.3 KD PROTEIN	ESCHERICHIA COLI	408-435								
PYICI_ECOLI	HYPOTHETICAL 88.1 KD PROTEIN	ESCHERICHIA COLI	122-149								
PYICN_ECOLI	HYPOTHETICAL 18.2 KD PROTEIN	ESCHERICHIA COLI	76-103								
PYICO_ECOLI	HYPOTHETICAL 49.9 KD PROTEIN	ESCHERICHIA COLI	320-347								
PYIDB_ECOLI	HYPOTHETICAL 13.8 KD PROTEIN	ESCHERICHIA COLI	34-78								
PYIDE_ECOLI	HYPOTHETICAL 38.9 KD PROTEIN	ESCHERICHIA COLI	86-113	182-209	277-304						
PYIDI_ECOLI	HYPOTHETICAL 13.7 KD PROTEIN	ESCHERICHIA COLI	56-83								
PYIDK_ECOLI	HYPOTHETICAL 63.1 KD PROTEIN	ESCHERICHIA COLI	2-39								
PYIDP_ECOLI	HYPOTHETICAL 27.3 KD PROTEIN	ESCHERICHIA COLI	63-97								
PYIEA_ECOLI	HYPOTHETICAL 49.2 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYIEC_ECOLI	HYPOTHETICAL 60.6 KD PROTEIN	ESCHERICHIA COLI	20-58	270-297							
PYIEC_ERWCH	HYPOTHETICAL PROTEIN	ERWINIA CHRYSANTHEMI	22-67								
PYIED_ECOLI	HYPOTHETICAL 34.6 KD PROTEIN	ESCHERICHIA COLI	86-120								
PYIEG_ECOLI	HYPOTHETICAL 46.9 KD PROTEIN	ESCHERICHIA COLI	293-327								
PYIEH_ECOLI	HYPOTHETICAL 24.7 KD PROTEIN	ESCHERICHIA COLI	51-78								
PYIEM_ECOLI	HYPOTHETICAL 15.0 KD PROTEIN	ESCHERICHIA COLI	73-105								
PYIEO_ECOLI	HYPOTHETICAL 31.5 KD PROTEIN	ESCHERICHIA COLI	201-242	386-407							
PYIFC_ECOLI	HYPOTHETICAL 19.6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYIGI_ECOLI	HYPOTHETICAL 14.0 KD PROTEIN	ESCHERICHIA COLI	51-92								
PYIGM_ECOLI	HYPOTHETICAL 33.7 KD PROTEIN	ESCHERICHIA COLI	120-154								
PYIGN_ECOLI	HYPOTHETICAL 34.7 KD PROTEIN	ESCHERICHIA COLI	207-234								
PYIGO_ECOLI	HYPOTHETICAL 28.1 KD PROTEIN	ESCHERICHIA COLI	67-94								
PYIGP_ECOLI	HYPOTHETICAL 22.3 KD PROTEIN	ESCHERICHIA COLI	133-200								
PYIGT_ECOLI	HYPOTHETICAL 27.8 KD PROTEIN	ESCHERICHIA COLI	132-159								
PYIHB_ECOLI	HYPOTHETICAL 21.2 KD PROTEIN	ESCHERICHIA COLI	13-40								
PYIHD_ECOLI	HYPOTHETICAL 10.3 KD PROTEIN	ESCHERICHIA COLI	28-55								
PYIHF_ECOLI	HYPOTHETICAL 34.1 KD PROTEIN	ESCHERICHIA COLI	272-306								
PYIHJ_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	112-139								
PYIHK_ECOLI	HYPOTHETICAL 65.4 KD PROTEIN	ESCHERICHIA COLI	4-31								
PYIHN4_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	83-110	128-154	297-324						
PYIHO_ECOLI	HYPOTHETICAL 81.8 KD PROTEIN	ESCHERICHIA COLI	612-646								
PYIHP_ECOLI	HYPOTHETICAL 33.1 KD PROTEIN	ESCHERICHIA COLI	357-384								
PYIHV_ECOLI	HYPOTHETICAL 31.9 KD PROTEIN	ESCHERICHIA COLI	72-99								
PYIHX_ECOLI	HYPOTHETICAL 23.5 KD PROTEIN	ESCHERICHIA COLI	9-36								
PYIHZ_ECOLI	HYPOTHETICAL 15.9 KD PROTEIN	ESCHERICHIA COLI	6-33								
PYIIP_ECOLI	HYPOTHETICAL 33.9 KD PROTEIN	ESCHERICHIA COLI	22-63								
PYIIU_ECOLI	HYPOTHETICAL 9.6 KD PROTEIN	ESCHERICHIA COLI	28-71								
PYIJC_ECOLI	HYPOTHETICAL 26.6 KD PROTEIN	ESCHERICHIA COLI	136-163								
PYIJH_ECOLI	HYPOTHETICAL 78.3 KD PROTEIN	ESCHERICHIA COLI	225-263								
PYIJK_ECOLI	HYPOTHETICAL 11.2 KD PROTEIN	ESCHERICHIA COLI	26-53								
PYIJO_ECOLI	HYPOTHETICAL 32.1 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYIJP_ECOLI	HYPOTHETICAL 66.6 KD PROTEIN	ESCHERICHIA COLI	110-137	419-446							
PYINL_LISMO	HYPOTHETICAL 26.8 KD PROTEIN	LISTERIA MONOCYTOGENES	7-34								
PYISJ_SHISO	INSERTION ELEMENT IS600	SHIGELLA SONNEI	62-89								
PYISL_STRCO	IS110 HYPOTHETICAL 43.6 KD PROTEIN	STREPTOMYCES COELICOLOR	125-152								
PYISJ_SHISO	INSERTION ELEMENT I5629	SHIGELLA SONNEI	66-100								
PYISP_DACSP	HYPOTHETICAL 42.1 KD PROTEIN	BACILLUS SP	312-339								
PYIAG_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	51-78								
PYIAI_ECOLI	HYPOTHETICAL 20.4 KD PROTEIN	ESCHERICHIA COLI	86-122								
PYIBH_ECOLI	HYPOTHETICAL 78.5 KD PROTEIN	ESCHERICHIA COLI	93-120								
PYIBL_ECOLI	HYPOTHETICAL 9.7 KD PROTEIN	ESCHERICHIA COLI	20-57								
PYIBM_ECOLI	HYPOTHETICAL 26.7 KD PROTEIN	ESCHERICHIA COLI	112-149								
PYIBQ_ECOLI	HYPOTHETICAL 15.7 KD PROTEIN	ESCHERICHIA COLI	2-29								
PYICC_ECOLI	HYPOTHETICAL 60.8 KD PROTEIN	ESCHERICHIA COLI	38-65	414-441	451-492						

PCGENE	10Jul1994	Prokaryotic Sequences							
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYICE_ECOLI	HYPOTHETICAL 60.5 KD PROTEIN	ESCHERICHIA COLI	454-481								
PYICO_ECOLI	HYPOTHETICAL 59.2 KD PROTEIN	ESCHERICHIA COLI	394-421								
PYICO_ECOLI	HYPOTHETICAL 23.1 KD PROTEIN	ESCHERICHIA COLI	91-118								
PYICP_ECOLI	HYPOTHETICAL 53.4 KD PROTEIN	ESCHERICHIA COLI	242-269								
PYICS_ECOLI	HYPOTHETICAL 73.7 KD PROTEIN	ESCHERICHIA COLI	366-396								
PYICW_ECOLI	HYPOTHETICAL ADC TRANSPORTER	ESCHERICHIA COLI	50-84								
PYIDA_ECOLI	HYPOTHETICAL 84.2 KD PROTEIN	ESCHERICHIA COLI	2-29	451-485							
PYIDB_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	103-134								
PYIIA_ECOLI	HYPOTHETICAL 17.5 KD PROTEIN PRECURSOR	ESCHERICHIA COLI	35-69	88-129							
PYKAB_BACFI	HYPOTHETICAL 48.8 KD PROTEIN	BACILLUS FIRMUS	321-355								
PYLAI_LACAC	HYPOTHETICAL PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAJ_LACAC	HYPOTHETICAL 14.5 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	13-42								
PYLAJ_LACAC	HYPOTHETICAL 14.4 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAC_SULSO	HYPOTHETICAL 24.4 KD PROTEIN	SULFOLOBUS SOLFATARICUS	23-50								
PYLP3_PSEPU	HYPOTHETICAL 44.7 KD PROTEIN	PSEUDOMONAS PUTIDA	186-213	314-341							
PYLPA_YEREN	YLPA LIPOPROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	184-221								
PYLT3_ANAVA	HYPOTHETICAL 22.6 KD PROTEIN	ANABAENA VARIABILIS	172-199								
PYLUD_LACLA	HYPOTHETICAL 29.7 KD PROTEIN	LACTOCOCCUS LACTIS	33-70								
PYMEJ_BACSU	HYPOTHETICAL 35.3 KD PROTEIN	BACILLUS SUBTILIS	32-79								
PYMG2_MYCGE	HYPOTHETICAL 114.4 KD PROTEIN PRECURSOR	MYCOPLASMA GENITALIUM	36-83	159-193	420-445	981-1008					
PYNGA_CLOPE	HYPOTHETICAL PROTEIN	CLOSTRIDIUM PERFRINGENS	139-166								
PYNGB_CLOPE	HYPOTHETICAL 31.2 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	12-49	63-97	182-211						
PYNII_METTL	HYPOTHETICAL PROTEIN	METHANOCOCCUS THERMOLITHOTROPHICUS	55-89								
PYNQI_PARDE	HYPOTHETICAL 9.3 KD PROTEIN	PARACOCCUS DENITRIFICANS	52-86								
PYNTJ_ANASP	HYPOTHETICAL 28.1 KD PROTEIN	ANABAENA SP	171-198								
PYNTJ_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	87-165								
PYOID_ECOLI	HYPOTHETICAL 21.4 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYOHG_ECOLI	HYPOTHETICAL 41.3 KD PROTEIN	ESCHERICHIA COLI	104-171	289-316							
PYOJA_ECOLI	HYPOTHETICAL 13.0 KD PROTEIN	ESCHERICHIA COLI	17-44								
PYOJE_ECOLI	HYPOTHETICAL 91.5 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYOJF_ECOLI	HYPOTHETICAL 9.3 KD PROTEIN	ESCHERICHIA COLI	41-82								
PYOJH_ECOLI	HYPOTHETICAL 34.1 KD PROTEIN	ESCHERICHIA COLI	145-193								
PYOJJ_ECOLI	HYPOTHETICAL 36.2 KD PROTEIN	ESCHERICHIA COLI	94-121								
PYOMJ_PHOSY	HYPOTHETICAL PROTEIN IN OMPH 3'REGION	PHOTOBACTERIUM SP	32-59								
PYOPH_YEREN	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA ENTEROCOLITICA	61-105								
PYOPH_YERPS	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA PSEUDOTUBERCULOSIS	61-105								
PYOPN_YEREN	OUTER MEMBRANE PROTEIN YOPN	YERSINIA ENTEROCOLITICA	23-50	66-93	233-262						
PYOPN_YERPS	OUTER MEMBRANE PROTEIN YOPN	YERSINIA PSEUDOTUBERCULOSIS	23-50	66-93	233-262						
PYOPQ_YEREN	YOPQ PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	61-88								
PYORA_HAEIN	HYPOTHETICAL 31.5 KD PROTEIN	HAEMOPHILUS INFLUENZAE	147-174								
PYORA_LISMO	HYPOTHETICAL 23.6 KD PROTEIN	LISTERIA MONOCYTOGENES	12-77								
PYORA_PYRWO	HYPOTHETICAL 24.7 KD PROTEIN	PYROCOCCUS WOESEI	183-210								
PYORB_HAEIN	HYPOTHETICAL 19.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	139-66								
PYORC_HAEIN	HYPOTHETICAL 19.9 KD PROTEIN	HAEMOPHILUS INFLUENZAE	49-79								
PYORE_HAEIN	8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	47-74	82-109							
PYORF_HAEIN	26.9 KD PROTEIN	HAEMOPHILUS INFLUENZAE	199-229								
PYORH_HAEIN	HYPOTHETICAL 11.7 KD PROTEIN	HAEMOPHILUS INFLUENZAE	7-34								
PYORI_HAEIN	93.4 KD PROTEIN	HAEMOPHILUS INFLUENZAE	416-450	688-722							
PYORQ_BACSU	HYPOTHETICAL 34 KD PROTEIN	BACILLUS SUBTILIS	148-175								
PYORX_PYRWO	HYPOTHETICAL PROTEIN	PYROCOCCUS WOESEI	66-93								
PYORZ_LISMO	HYPOTHETICAL 16.9 KD PROTEIN	LISTERIA MONOCYTOGENES	27-54								
PYP1S_STAAU	HYPOTHETICAL 15.5 KD PROTEIN	STAPHYLOCOCCUS AUREUS	71-98	110-137							
PYP1S_BACSU	HYPOTHETICAL 22.3 KD PROTEIN	BACILLUS SUBTILIS	57-84								
PYP1S_STAAU	HYPOTHETICAL 22.3 KD PROTEIN	STAPHYLOCOCCUS AUREUS	29-70								
PYP2A_STAAU	HYPOTHETICAL 26.9 KD PROTEIN	STAPHYLOCOCCUS AUREUS	34-104								
PYP2B_STAAU	HYPOTHETICAL 27.0 KD PROTEIN	STAPHYLOCOCCUS AUREUS	23-60	62-89	179-206						
PYP2C_STAAU	HYPOTHETICAL 27.7 KD PROTEIN	STAPHYLOCOCCUS AUREUS	13-83	129-176							

PGENE	1071178t4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA4	AREA3	AREA6	AREA1	AREA8	AREA9
PYP7_AGRT4	HYPOTHETICAL PROTEIN 7	AGROBACTERIUM TUMEFACIENS	29-56								
PYPA3_LEGPN	HYPOTHETICAL PROTEIN	LEGIONELLA PNEUMOPHILA	94-135								
PYPA5_ENTFA	HYPOTHETICAL 13 KD PROTEIN	ENTEROCOCCUS FAECALIS	79-106								
PYPA_BACAN	HYPOTHETICAL 21.6 KD PROTEIN	BACILLUS ANTHRACIS	13-47	115-162							
PYPC1_ECOLI	HYPOTHETICAL 27.6 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYPDA_BACSU	HYPOTHETICAL 27.3 KD PROTEIN	BACILLUS SUBTILIS	184-222								
PYPFT_ECOLI	HYPOTHETICAL 12.6 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYPH1_SYNP2	HYPOTHETICAL 18.1 KD PROTEIN	SYNECHOCOCCUS SP	34-61								
PYPI6_CLOPE	HYPOTHETICAL 19.3 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	7-34	43-77	83-149						
PYPI9_CLOPE	HYPOTHETICAL 14.5 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	2-59								
PYPIX_CLOPE	HYPOTHETICAL 38.4 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	110-137	263-290	303-340						
PYPIY_PSEAE	HYPOTHETICAL 38.5 KD PROTEIN	PSEUDOMONAS AERUGINOSA	22-52								
PYPP_BACSU	HYPOTHETICAL PROCESSING PROTEASE	BACILLUS SUBTILIS	329-356								
PYPQQ_KLEPN	HYPOTHETICAL PROTEIN	KLEBSIELLA PNEUMONIAE	243-270								
PYPS2_PLEBO	HYPOTHETICAL 13.1 KD PROTEIN	PLECTONEMA BORYANUM	27-54								
PYPV1_METTF	HYPOTHETICAL 40.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYPV3_METTF	HYPOTHETICAL 22.5 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	3-30								
PYPV7_METTF	HYPOTHETICAL 17.3 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	69-117								
PYPVB_METTF	HYPOTHETICAL 49.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	333-360	389-430							
PYPYB_BACSU	HYPOTHETICAL 72.4 KD PROTEIN	BACILLUS SUBTILIS	602-636								
PYPZ1_METTF	HYPOTHETICAL 40.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYPZ2_METTF	HYPOTHETICAL 33.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	38-65	154-188							
PYPZ5_METTF	HYPOTHETICAL 54.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	193-220	226-253	381-408						
PYPZ7_METTF	HYPOTHETICAL 9.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	5-78								
PYR18_THEPE	HYPOTHETICAL 18.7 KD PROTEIN	THERMOFILUM PENDENS	82-109								
PYRB1_HALCU	HYPOTHETICAL 40 KD GTP-BINDING PROTEIN	HALOBACTERIUM CUTIRUBRUM	20-51								
PYREC_SYNP2	HYPOTHETICAL 28.7 KD PROTEIN	SYNECHOCOCCUS SP	49-76								
PYRF0_SALTY	HYPOTHETICAL 40.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	143-190								
PYRF2_SALTY	HYPOTHETICAL 51.0 KD PROTEIN	SALMONELLA TYPHIMURIUM	428-455								
PYRF3_SALTY	HYPOTHETICAL 20.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	29-56								
PYRF6_SALTY	HYPOTHETICAL 36.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	130-157								
PYRG2_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	140-167								
PYRL1_METVA	HYPOTHETICAL PROTEIN	METHANOCOCCUS VANNIELII	40-93	129-156							
PYRP1_METVA	HYPOTHETICAL 11.6 KD PROTEIN	METHANOCOCCUS VANNIELII	13-40								
PYRP2_SULAC	HYPOTHETICAL 11.3 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	5-51								
PYRP3_SULAC	HYPOTHETICAL 14.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	37-71								
PYRTP_BACSU	HYPOTHETICAL 25.3 KD PROTEIN	BACILLUS SUBTILIS	39-56								
PYRT5_BACSU	HYPOTHETICAL 11.4 KD PROTEIN	BACILLUS SUBTILIS	3-30	44-81							
PYSCB_YEREN	HYPOTHETICAL YSC OPERON PROTEIN B	YERSINIA ENTEROCOLITICA	90-121								
PYSCC_YEREN	YSC OPERON PROTEIN C PRECURSOR	YERSINIA ENTEROCOLITICA	38-72	365-399							
PYSCD_YEREN	YSC OPERON PROTEIN D	YERSINIA ENTEROCOLITICA	242-269								
PYSCH_YEREN	YSC OPERON PROTEIN H	YERSINIA ENTEROCOLITICA	28-58								
PYSCH_YERPS	YSC OPERON PROTEIN H	YERSINIA PSEUDOTUBERCULOSIS	28-58								
PYSCI_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	49-76								
PYSCI_YERPS	YSC OPERON PROTEIN I	YERSINIA PSEUDOTUBERCULOSIS	49-76								
PYSCJ_YEREN	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA ENTEROCOLITICA	99-126								
PYSCJ_YERPS	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	99-126								
PYSCL_YEREN	YSC OPERON PROTEIN L	YERSINIA ENTEROCOLITICA	41-68								
PYSCL_YERPS	YSC OPERON PROTEIN L	YERSINIA PSEUDOTUBERCULOSIS	41-68								
PYSMA_SERMA	HYPOTHETICAL 9.5 KD PROTEIN	SERRATIA MARCESCENS	11-70								
PYSO1_DESAM	HYPOTHETICAL 28.3 KD PROTEIN	DESULFUROLOBUS AMBIVALENS	68-109								
PYSO1_DESAM	HYPOTHETICAL PROTEIN	DESULFUROLOBUS AMBIVALENS	65-155								
PYSP1_LEPIN	HYPOTHETICAL PROTEIN	LEPTOSPIRA INTERROGANS	6-33	60-94							
PYSR1_MYCLY	HYPOTHETICAL PROTEIN	MYCOPLASMA MYCOIDES	35-99	185-227	306-327						
PYSY1_BACSU	HYPOTHETICAL 19.6 KD PROTEIN	BACILLUS SUBTILIS	72-99								
PYSYN_METFE	HYPOTHETICAL PROTEIN	METHANOTHERMUS FERVIDUS	78-105								
PYT17_STRFR	HYPOTHETICAL 31.1 KD PROTEIN	STREPTOMYCES FRADIAE	246-273								

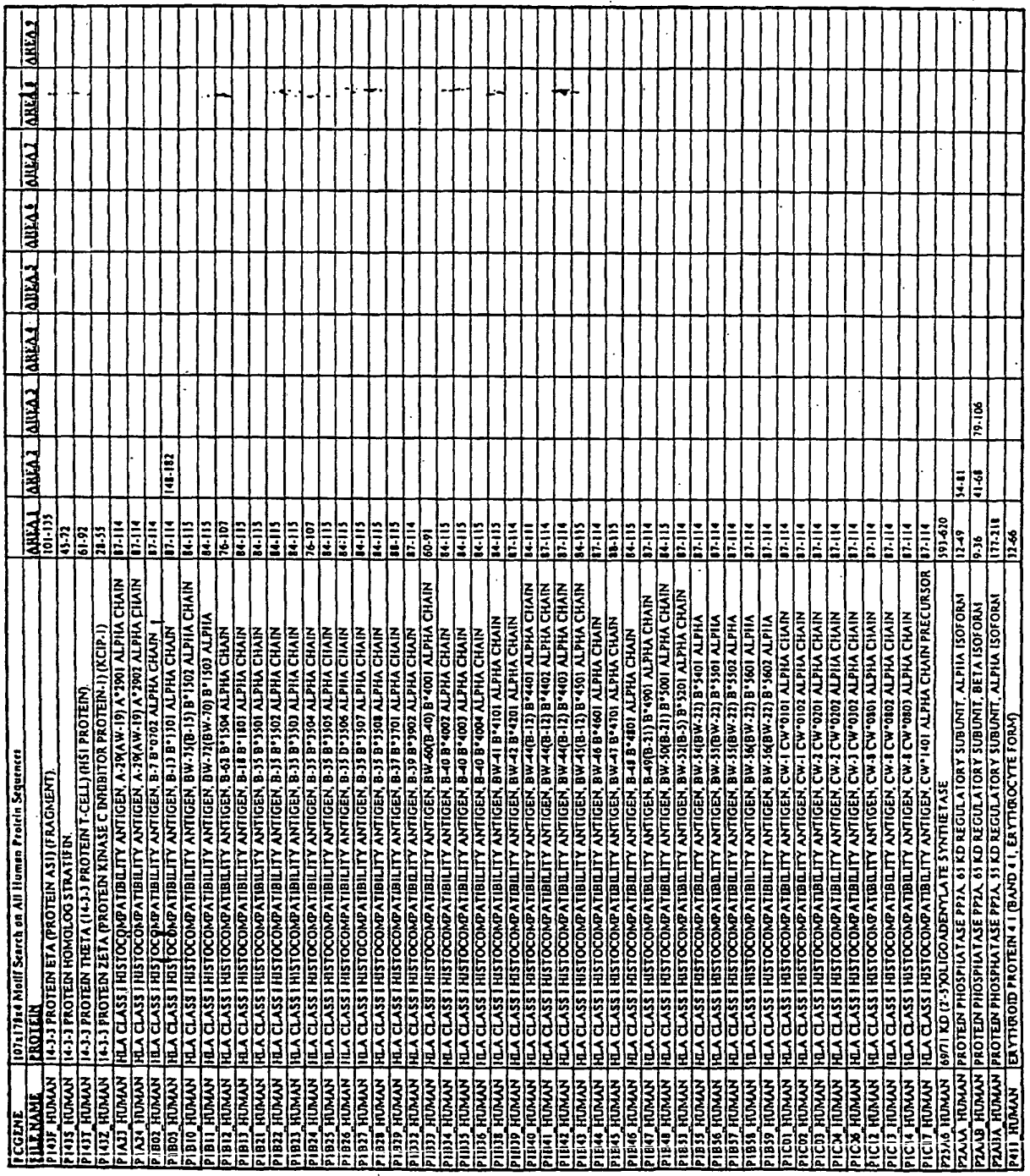
PCGENE	107a17Bs4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYTDK_BACSU	HYPOTHETICAL 33 6 KD PROTEIN	BACILLUS SUBTILIS	244-271	279-306							
PYTRE_LEPBI	HYPOTHETICAL 22 KD PROTEIN	LEPTOSPIRA BIFLEXA	84-113								
PYTRP_LACLA	HYPOTHETICAL 13 3 KD PROTEIN	LACTOCOCCUS LACTIS	76-112								
PYTS1_BACSU	HYPOTHETICAL 20 KD PROTEIN	BACILLUS SUBTILIS	37-64								
PYTSF_SPICI	HYPOTHETICAL 23 8 KD PROTEIN	SPIROPLASMA CITRI	102-149								
PYX04_BACSU	HYPOTHETICAL 12 8 KD PROTEIN	BACILLUS SUBTILIS	37-64	65-93							
PYX06_BACSU	HYPOTHETICAL 31 0 KD PROTEIN	BACILLUS SUBTILIS	142-169								
PYX13_BACSU	HYPOTHETICAL 26 0 KD PROTEIN	BACILLUS SUBTILIS	17-51								
PYX15_BACSU	HYPOTHETICAL 61 8 KD PROTEIN	BACILLUS SUBTILIS	165-207	261-289							
PYX18_BACSU	HYPOTHETICAL 66 8 KD PROTEIN	BACILLUS SUBTILIS	3-30	34-61	94-142						
PYX19_BACSU	HYPOTHETICAL 31 3 KD PROTEIN	BACILLUS SUBTILIS	36-83	85-112							
PYX20_BACSU	HYPOTHETICAL 33 2 KD PROTEIN	BACILLUS SUBTILIS	24-58								
PYX12_ANASP	HYPOTHETICAL 18 9 KD PROTEIN	ANABAENA SP	77-104								
PYXYB_CALSA	HYPOTHETICAL 10 7 KD PROTEIN	CALDOCELLUM SACCHAROLYTICUM	9-39								
PYXYC_CALSA	HYPOTHETICAL PROTEIN	CALDOCELLUM SACCHAROLYTICUM	41-94								
PYZE1_ECOLI	HYPOTHETICAL 16 7 KD PROTEIN	ESCHERICHIA COLI	41-78								

TABLE IX

107 X 178 X 4 SEARCH RESULTS SUMMARY

FOR ALL HUMAN PROTEINS

FOR ILLUSTRATIVE PURPOSES ONLY



ICGENE	[07:17]64 Motif Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	101-135								
P14JF_HUMAN	14-3-3 PROTEIN ETA (PROTEIN A51) (FRAGMENT).	43-92								
P14JS_HUMAN	14-3-3 PROTEIN HOMOLOG STRATIFIN.	61-92								
P14JT_HUMAN	14-3-3 PROTEIN THETA (14-3-3 PROTEIN T-CELL) (HS1 PROTEIN)	28-55								
P14JZ_HUMAN	14-3-3 PROTEIN ZETA (PROTEIN KINASE C INHIBITOR PROTEIN-1) (KCIP-1)	87-114								
P1AJ3_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-29(AW-19) A*2901 ALPHA CHAIN	87-114								
P1AJ4_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-29(AW-19) A*2902 ALPHA CHAIN	87-114	148-182							
P1B02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-7 B*0702 ALPHA CHAIN †	87-114								
P1B03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-13 B*1301 ALPHA CHAIN	84-115								
P1B10_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-75(B-15) B*1502 ALPHA CHAIN	84-115								
P1B11_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-72(BW-70) B*1503 ALPHA	76-107								
P1B12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-62 B*1504 ALPHA CHAIN	84-115								
P1B13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-18 B*1801 ALPHA CHAIN	84-115								
P1B21_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3501 ALPHA CHAIN	84-115								
P1B22_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3502 ALPHA CHAIN	84-115								
P1B23_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3503 ALPHA CHAIN	84-115								
P1B24_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3504 ALPHA CHAIN	76-107								
P1B25_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3505 ALPHA CHAIN	84-115								
P1B26_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3506 ALPHA CHAIN	84-115								
P1B27_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3507 ALPHA CHAIN	84-115								
P1B28_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3508 ALPHA CHAIN	84-115								
P1B29_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-37 B*3701 ALPHA CHAIN	88-115								
P1B32_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-39 B*3903 ALPHA CHAIN	87-114								
P1B33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-60(B-40) B*4001 ALPHA CHAIN	60-91								
P1B34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4002 ALPHA CHAIN	84-115								
P1B35_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4003 ALPHA CHAIN	84-115								
P1B36_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4004 ALPHA CHAIN	84-115								
P1B38_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-41 B*4101 ALPHA CHAIN	84-115								
P1B39_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-42 B*4201 ALPHA CHAIN	87-114								
P1B40_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4401 ALPHA CHAIN	84-111								
P1B41_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4402 ALPHA CHAIN	87-114								
P1B42_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4403 ALPHA CHAIN	87-114								
P1B43_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-45(B-12) B*4501 ALPHA CHAIN	84-115								
P1B44_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-46 B*4601 ALPHA CHAIN	87-114								
P1B45_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-47 B*4701 ALPHA CHAIN	88-115								
P1B46_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-48 B*4801 ALPHA CHAIN	84-115								
P1B47_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-49(B-21) B*4901 ALPHA CHAIN	87-114								
P1B48_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-50(B-21) B*5001 ALPHA CHAIN	84-115								
P1B51_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-52(B-5) B*5201 ALPHA CHAIN	87-114								
P1B55_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-54(BW-22) B*5401 ALPHA	87-114								
P1B56_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-53(BW-22) B*5301 ALPHA	87-114								
P1B57_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5502 ALPHA	87-114								
P1B58_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5601 ALPHA	87-114								
P1B59_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5603 ALPHA	87-114								
P1C01_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0101 ALPHA CHAIN	87-114								
P1C02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0102 ALPHA CHAIN	87-114								
P1C03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0201 ALPHA CHAIN	87-114								
P1C04_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0202 ALPHA CHAIN	87-114								
P1C06_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-3 CW*0302 ALPHA CHAIN	87-114								
P1C12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0801 ALPHA CHAIN	87-114								
P1C13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0802 ALPHA CHAIN	87-114								
P1C14_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0803 ALPHA CHAIN	87-114								
P1C17_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW*1401 ALPHA CHAIN PRECURSOR	87-114								
P2J/6_HUMAN	69/71 KD (2'-5')OLIGOADENYLATE SYNTHETASE	591-620								
P2AJA_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, ALPHA ISOFORM	12-49	54-81							
P2AJB_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, BETA ISOFORM	9-36	41-68	79-106						
P2AJA_HUMAN	PROTEIN PHOSPHATASE PP2A, 55 KD REGULATORY SUBUNIT, ALPHA ISOFORM	177-218								
P4J1_HUMAN	ERYTHROID PROTEIN 4.1 (BAND 4.1, ERYTHROCYTE FORM)	12-46								

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FILE NAME	PROTEIN	1-30	708-733							
P412_HUMAN	NON-ERYTHROID PROTEIN 4.1 (BAND 4.1, LYMPHOID FORM).	173-200	518-545							
P42_HUMAN	ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2.	211-232								
P4F2_HUMAN	4F2 CELL-SURFACE ANTIGEN HEAVY CHAIN (4F2HC) (LYMPHOCYTE ACTIVATION	311-338								
P5HIE_HUMAN	5-HYDROXYTRYPTAMINE 1E RECEPTOR (5-HT-1E) (SEROTONIN RECEPTOR).	222-253								
P5HIF_HUMAN	5-HYDROXYTRYPTAMINE 1F RECEPTOR (5-HT-1F) (SEROTONIN RECEPTOR).	22-56								
P5HIA_HUMAN	5-HYDROXYTRYPTAMINE 1A RECEPTOR (5-HT-2A) (SEROTONIN RECEPTOR).	72-99								
P5HT_HUMAN	5-HYDROXYTRYPTAMINE 7 RECEPTOR (5-HT-7) (5-HT-X) (SEROTONIN RECEPTOR)	98-122	330-357							
PA1AC_HUMAN	ALPHA-1-ANTICHYMOTRYPSIN PRECURSOR (ACT).	92-119								
PA1AG_HUMAN	ALPHA-1-ACID GLYCOPROTEIN 1 PRECURSOR (OROSOMUCOID) (ORD).	168-202								
PA1AT_HUMAN	ALPHA-1-ANTITRYPSIN PRECURSOR (ALPHA-1 PROTEASE INHIBITOR) (ALPHA-1-	163-197								
PA1AU_HUMAN	ALPHA-1-ANTITRYPSIN-RELATED PROTEIN PRECURSOR.	191-218	365-393							
PA2AP_HUMAN	ALPHA-2-ANTIPLASMIN PRECURSOR (ALPHA-2-PLASMIN INHIBITOR) (ALPHA-2-	104-134								
PA2GL_HUMAN	LEUCINE-RICH ALPHA-2-GLYCOPROTEIN (LRG).	53-80	319-349	1085-1112	1402-1429					
PA2MG_HUMAN	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M).	428-455								
PA4_HUMAN	ALZHEIMER'S DISEASE AMYLOID A4 PROTEIN PRECURSOR (PROTEASE NEXIN-II)	92-119	720-747							
PAACT_HUMAN	ALPHA-ACTININ (F-ACTIN CROSS LINKING PROTEIN).	109-136								
PAATM_HUMAN	ASPARTATE AMINOTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.6.1.1)	61-88	119-147	2604-2631						
PABP2_HUMAN	ENDOTHELIAL ACTIN-BINDING PROTEIN (ABP-280) (NONMUSCLE FILAMIN)	306-333								
PAC17_HUMAN	ACTIVATOR 1 37 KD SUBUNIT (REPLICATION FACTOR C 37 KD SUBUNIT) (A1	14-51	182-209	668-700						
PAC13_HUMAN	ACTIVATOR 1 140 KD SUBUNIT (REPLICATION FACTOR C LARGE SUBUNIT) (A1	78-108	179-206	313-340						
PACOL_HUMAN	ACYL-COA DEHYDROGENASE PRECURSOR, LONG-CHAIN SPECIFIC (EC 1.3.99.13)	78-113	126-153	676-710						
PACE_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, SOMATIC (EC 3.4.15.1) (ACE)	655-689	700-727	1250-1284						
PACHA_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, ALPHA CHAIN PRECURSOR.	48-80								
PACHE_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, EPSILON CHAIN PRECURSOR	46-98								
PACHG_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, GAMMA CHAIN PRECURSOR	45-79	304-331							
PACHP_HUMAN	NEURONAL ACETYLCHOLINE RECEPTOR PROTEIN, BETA-4 CHAIN (FRAGMENT)	39-56	70-97							
PACRO_HUMAN	ACROSIN PRECURSOR (EC 3.4.21.10).	122-149								
PACYM_HUMA	ACYLPHOSPHATASE, MUSCLE TYPE ISOZYME (EC 3.6.1.7) (ACYLPHOSPHATE	26-53								
PADT1_HUMAN	ADP,ATP CARRIER PROTEIN, FIBROBLAST ISOFORM (ADP/ATP TRANSLOCASE 2)	162-189								
PADT3_HUMAN	ADP,ATP CARRIER PROTEIN, LIVER ISOFORM T3 (ADP/ATP TRANSLOCASE 3)	163-190								
PAK19_HUMAN	A-KINASE ANCHOR PROTEIN 79 (AKAP 79) (CAMP-DEPENDENT PROTEIN KINASE	197-238	381-414							
PALFA_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1.2.13) A (MUSCLE).	36-63								
PALFB_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1.2.13) B (LIVER).	79-113								
PAMD1_HUMAN	AMP DEAMINASE 1 (EC 3.5.4.6) (MYOADENYLATE DEAMINASE) (AMP DEAMINASE	59-86								
PAMD2_HUMAN	AMP DEAMINASE 2 (EC 3.5.4.6) (AMP DEAMINASE ISOFORM E).	49-76								
PAMPN_HUMAN	AMINOPEPTIDASE N (EC 3.4.11.2) (MICROSOMAL AMINOPEPTIDASE) (GP150)	492-523	604-648	926-964						
PAMPR_HUMAN	AMPHIREGULIN PRECURSOR (AR).	213-247								
PAMRP_HUMAN	ALPHA-2-MACROGLOBULIN RECEPTOR-ASSOCIATED PROTEIN PRECURSOR.	173-206	263-290							
PANTB_HUMAN	BRAIN NATRIURETIC PEPTIDE PRECURSOR	36-63								
PANK1_HUMAN	ANKYRIN R (ANKYRINS 2.1 AND 2.2) (ERYTHROCYTE ANKYRIN).	812-839	1004-1031	1617-1644						
PANKB_HUMAN	ANKYRIN, BRAIN VARIANT 1 (ANKYRIN B) (ANKYRIN, NONERYTHROID)	1344-1371								
PANKC_HUMAN	ANKYRIN, BRAIN VARIANT 2 (ANKYRIN B) (ANKYRIN, NONERYTHROID).	1811-1838								
PANPA_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR A PRECURSOR (ANP-A) (ANPRA) (GC-A)	553-580	825-852							
PANPB_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR B PRECURSOR (ANP-B) (ANPRB) (GC-B)	810-837								
PANT1_HUMAN	ANTITHROMBIN-III PRECURSOR (ATIII).	162-196								
PANX1_HUMAN	ANNEXIN II (LIPOCORTIN II) (CALPACTIN 1 HEAVY CHAIN) (CHROMOBINDIN 8)	40-67	306-333							
PANX3_HUMAN	ANNEXIN III (LIPOCORTIN III) (PLACENTAL ANTICOAGULANT PROTEIN III)	215-242								
PANX6_HUMAN	ANNEXIN VI (LIPOCORTIN VI) (P68) (P70) (PROTEIN III) (CHROMOBINDIN 20)	60-87	628-655							
PANX7_HUMAN	ANNEXIN, INTESTINE-SPECIFIC (ISA).	37-78	137-164							
PAOFA_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) A (EC 1.4.3.4) (MONOAMINE OXIDASE)	16-43	74-104							
PAOFB_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) B (EC 1.4.3.4) (MONOAMINE OXIDASE)	68-95								
PAPA1_HUMAN	APOLIPOPROTEIN A-I PRECURSOR (APO-AI)	57-84								
PAPB_HUMAN	APOLIPOPROTEIN B-100 PRECURSOR (APO B-100/APO B-48)	585-619	1033-1100	1333-1380	1324-1584	2074-2113	2132-2159	2181-2215	2240-2271	2360-2389
		2466-2507	2529-2559	2850-3000	3360-3390	3480-3570	3620-3654	4040-4074	4090-4120	4135-4167
		4274-4301	4397-4438	4465-4492	4499-4544					

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APC2_HUMAN	APOLIPOPROTEIN C-II PRECURSOR (APO-CII).	36-63							
APC_HUMAN	ADENOMATOUS POLYPOSIS COLI PROTEIN (APC PROTEIN).	145-172	814-861	1795-1822	2172-2212	2372-2609			
APE_HUMAN	APOLIPOPROTEIN E PRECURSOR (APO-E)	48-81	247-274						
APOA_HUMAN	APOLIPOPROTEIN(A) PRECURSOR (EC 3.4.21.-) (APO(A)) (LP(A)).	4448-4475							
AQP1_HUMAN	AQUAPORIN-CHIP (WATER CHANNEL PROTEIN FOR RED BLOOD CELLS AND KIDNEY)	59-73							
ARK1_HUMAN	BETA-ADRENERGIC RECEPTOR KINASE 1 (EC 2.7.1.126) (BETA-ARK-1).	523-553							
ARLY_HUMAN	ARGININOSUCCINATE LYASE (EC 4.3.2.1) (ARGINOSUCCINASE).	69-103							
ARNT_HUMAN	ARYL HYDROCARBON RECEPTOR NUCLEAR TRANSLOCATOR (ARNT PROTEIN) (DIO	223-250							
ARRC_HUMAN	BETA-ARRESTIN 2.	215-242	305-332						
ARR3_HUMAN	ARRESTIN (RETINAL S-ANTIGEN) (48 KD PROTEIN) (S-AG).	299-352							
ARY1_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, MONOMORPHIC (EC 2.3.1.5) (NAT).	7-34							
ARY2_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, POLYMORPHIC (EC 2.3.1.5) (PNAT).	7-34							
ASNS_HUMAN	ASPARAGINE SYNTHETASE (GLUTAMINE-HYDROLYZING) (EC 6.3.5.4) (TS11 CELL	311-338	347-374						
ATCD_HUMAN	CALCIUM-TRANSPORTING ATPASE SARCOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190							
ATCE_HUMAN	CALCIUM-TRANSPORTING ATPASE ENDOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190							
ATF1_HUMAN	TRANSCRIPTION FACTOR ATF-1 (FRAGMENT).	203-230							
ATF3_HUMAN	TRANSCRIPTION FACTOR ATF-3 (FRAGMENT).	155-183							
ATF5_HUMAN	TRANSCRIPTION FACTOR ATF-5 (FRAGMENT).	10-61							
ATF6_HUMAN	TRANSCRIPTION FACTOR ATF-6 (FRAGMENT).	34-68							
ATFA_HUMAN	TRANSCRIPTION FACTOR ATF-A AND ATF-A-DELTA.	351-394							
ATPF_HUMAN	ATP SYNTHASE B CHAIN, MITOCHONDRIAL PRECURSOR (EC 3.6.1.34).	129-163							
P1232_HUMAN	NUCLEOLAR PHOSPHOPROTEIN B23 (NUCLEOPHOSMIN) (NUMATRIN).	114-141							
P1J2AR_HUMAN	BETA-2-ADRENERGIC RECEPTOR.	292-319	345-372						
P1J3AG_HUMAN	AMION EXCHANGE PROTEIN 2 (NON-ERYTHROID BAND 3-LIKE PROTEIN) (BND3L).	1081-1111							
P194_HUMAN	B94 PROTEIN.	115-142	525-562	609-636					
P1ANT_HUMAN	ERYTHROCYTE BAND 7 INTEGRAL MEMBRANE PROTEIN.	106-140							
P1ASO_HUMAN	BASONUCLIN.	120-147	310-337	773-807					
P1BCB_HUMAN	TRANSFORMING PROTEIN BCL-3-BETA.	178-205							
P1CGF_HUMAN	B-CELL GROWTH FACTOR PRECURSOR (BCGF-12 KD).	33-63							
P1CR_HUMAN	BREAKPOINT CLUSTER REGION PROTEIN.	784-823							
P1GLR_HUMAN	BETA-GLUCURONIDASE PRECURSOR (EC 3.2.1.31).	246-280	504-531						
P1MP2_HUMAN	BONE MORPHOGENETIC PROTEIN 2 PRECURSOR (BMP-2) (BMP-2A).	216-250							
P1MP3_HUMAN	BONE MORPHOGENETIC PROTEIN 3 PRECURSOR (BMP-3).	202-239							
P1MP6_HUMAN	BONE MORPHOGENETIC PROTEIN 6 PRECURSOR (BMP-6).	274-301							
P1MP7_HUMAN	BONE MORPHOGENETIC PROTEIN 7 PRECURSOR (BMP-7) (OSTEOGENIC PROTEIN 1)	192-219							
P1N31_HUMAN	BN31 PROTEIN.	284-311							
P1P1_HUMAN	BACTERICIDAL PERMEABILITY INCREASING PROTEIN PRECURSOR (BPI) (CAP 57).	168-195							
P1RS3_HUMAN	BOMBESIN RECEPTOR SUBTYPE-3 (BRS-3).	10-37							
P1TF1_HUMAN	BASIC TRANSCRIPTION FACTOR 61 KD SUBUNIT (P61).	138-162	353-385						
P1TG1_HUMAN	BTG1 PROTEIN (B-CELL TRANSLOCATION GENE 1 PROTEIN).	26-53							
PC1TC_HUMAN	C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFO	330-363							
PC1TA_HUMAN	MHC CLASS II TRANSACTIVATOR CIITA.	931-948							
PCA19_HUMAN	COLLAGEN ALPHA 1(IX) CHAIN PRECURSOR.	120-150							
PCA1B_HUMAN	COLLAGEN ALPHA 1(XI) CHAIN PRECURSOR.	341-368							
PCABV_HUMAN	CALBINDIN (VITAMIN D-DEPENDENT CALCIUM-BINDING PROTEIN (CABP), AVIAN-	27-54							
PCAD3_HUMAN	CADHERIN 3 PRECURSOR (T84 ANTIGEN).	223-250							
PCADE_HUMAN	EPITHELIAL-CADHERIN PRECURSOR (E-CADHERIN) (UVOMORULIN) (CAM 120/80).	838-865							
PCADN_HUMAN	NEURAL-CADHERIN PRECURSOR (N-CADHERIN).	95-122	313-350						
PCADP_HUMAN	PLACENTAL-CADHERIN PRECURSOR (P-CADHERIN).	384-411	580-607						
PCAGA_HUMAN	CALGRANULIN A (MIGRATION INHIBITORY FACTOR-RELATED PROTEIN 8) (MRP-8)	2-29							
PCALR_HUMAN	CALCITONIN RECEPTOR PRECURSOR (CT-R).	140-167							
PCAMA_HUMA	CARTILAGE MATRIX PROTEIN PRECURSOR.	397-324	467-494						
PCAP1_HUMAN	CALPAIN 1, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	361-388							
PCAP2_HUMAN	CALPAIN 2, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	257-284	502-529						
PCAP3_HUMAN	CALPAIN P94, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-	674-701							
PCBP1_HUMAN	PLACENTAL CALCIUM-BINDING PROTEIN.	13-40							
PCC1_HUMAN	ADENYLYL CYCLASE-ASSOCIATED PROTEIN (CAP).	111-138	163-197	321-355					

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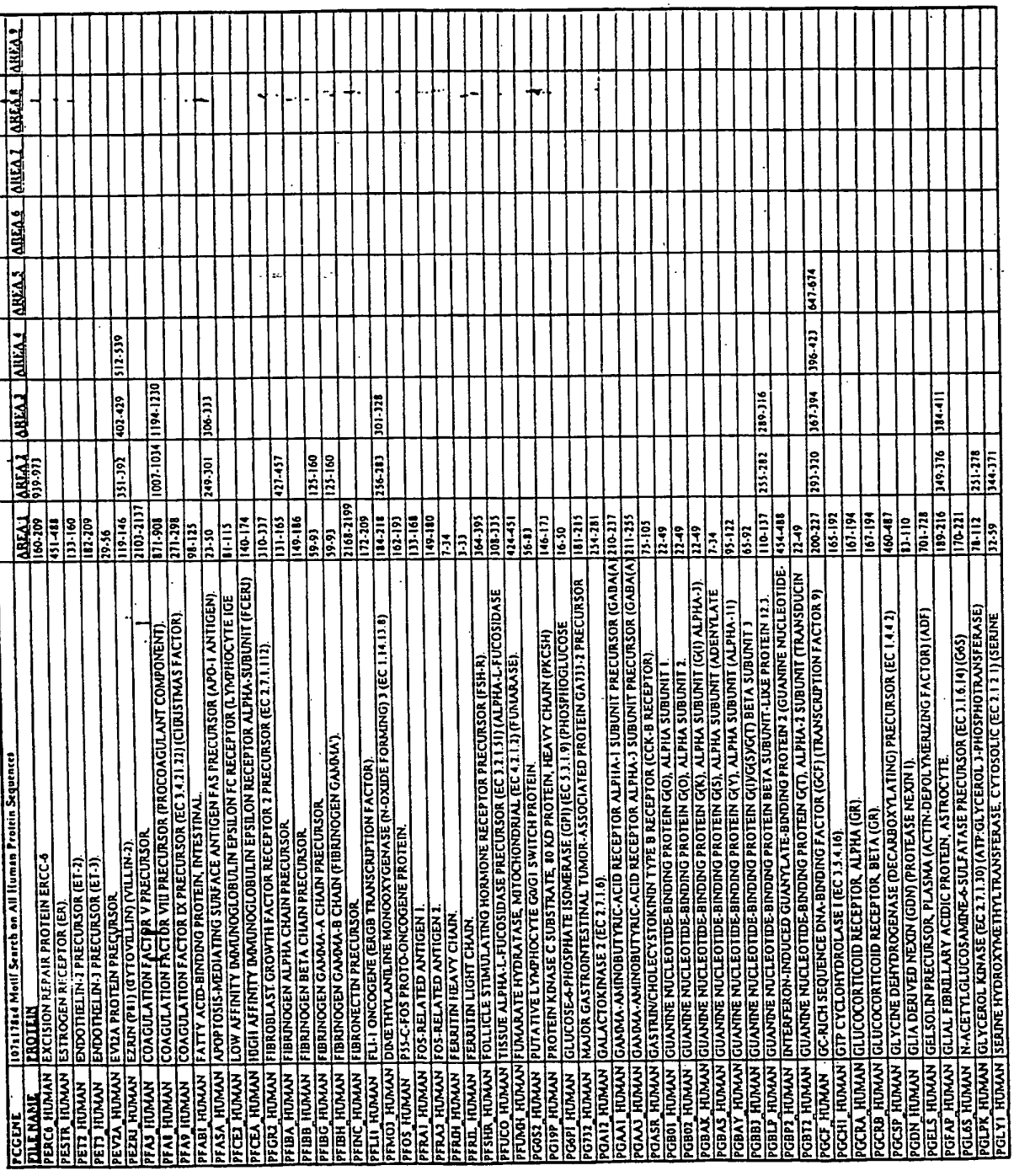
FILENAME	PROTEIN	217-244								
PCART_HUMAN	CALRETININ (29 KD CALBINDIN).	14-48								
PCASB_HUMAN	BETA CASEIN PRECURSOR.	422-456								
PCATA_HUMAN	CATALASE (EC 1.11.1.6).	253-282								
PCATD_HUMAN	CATHEPSIN D PRECURSOR (EC 3.4.23.5).	41-68								
PCATH_HUMAN	CATHEPSIN H PRECURSOR (EC 3.4.22.16).	278-305								
PCATL_HUMAN	CATHEPSIN L PRECURSOR (EC 3.4.22.15) (MAJOR EXCRETED PROTEIN) (MEP).	30-57	142-169							
PCATS_HUMAN	CATHEPSIN S PRECURSOR (EC 3.4.22.27).	24-58	138-165							
PCBFB_HUMAN	CCAAT-BINDING TRANSCRIPTION FACTOR SUBUNIT B (CBF-B) (NF-Y PROTEIN	88-122								
PCBG_HUMAN	CORTICOSTEROID-BINDING GLOBULIN PRECURSOR (CBG) (TRANSCORTIN).	69-129	278-305	319-346						
PCBPB_HUMAN	CARBOXYPEPTIDASE B PRECURSOR (EC 3.4.17.2) (PANCREAS-SPECIFIC PROTEIN)	335-382								
PCBPH_HUMAN	CARBOXYPEPTIDASE H PRECURSOR (EC 3.4.17.10) (CARBOXYPEPTIDASE E) (CPE)	35-62								
PCC21_HUMAN	CDC21 HOMOLOG (P1-CDC21) (FRAGMENT).	209-240								
PCC27_HUMAN	PROTEIN CDC27HS.	1298-1342								
PCCG1_HUMAN	TRANSCRIPTION INITIATION FACTOR TFIID 250 KD SUBUNIT (TBP-ASSOCIATED	142-169								
PCD14_HUMAN	MONOCYTE DIFFERENTIATION ANTIGEN CD14 PRECURSOR (MYELOID CELL-SPECIF	32-63	281-308							
PCD1A_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL.	77-104								
PCD1E_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1E PRECURSOR (CD1E ANTIGEN) (R2G1).	226-255								
PCD20_HUMAN	B-LYMPHOCYTE ANTIGEN CD20 (B-LYMPHOCYTE SURFACE ANTIGEN B1) (LEU-16)	88-119								
PCD2R_HUMAN	CD20 RECEPTOR PRECURSOR.	226-255								
PCD2_HUMAN	T-CELL SURFACE ANTIGEN CD2 PRECURSOR (T-CELL SURFACE ANTIGEN	74-108								
PCD34_HUMAN	HEMOPOIETIC PROGENITOR CELL ANTIGEN CD34 PRECURSOR.	101-128								
PCD37_HUMAN	LEUKOCYTE ANTIGEN CD37.	7-34								
PCD3G_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD3 GAMMA CHAIN PRECURSOR (T-CELL RECEPT	96-130	183-217							
PCD3L_HUMAN	CD30 LIGAND (CD30-L).	228-255								
PCD4X_HUMAN	CD44 ANTIGEN, EPITHELIAL FORM PRECURSOR (CD44E) (PHAGOCYTIC	44-71	240-267							
PCD4_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD4 PRECURSOR (T-CELL SURFACE ANTIGEN	87-114								
PCD53_HUMAN	LEUKOCYTE SURFACE ANTIGEN CD53.	118-177								
PCD72_HUMAN	B-CELL DIFFERENTIATION ANTIGEN CD72 (LYB-2).	5-32								
PCDK3_HUMAN	CELL DIVISION PROTEIN KINASE 3 (EC 2.7.1.-).	5-32								
PCDK5_HUMAN	CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1.-) (KINASE PSSALRE).	296-330								
PCEBB_HUMAN	CCAAT/ENHANCER BINDING PROTEIN BETA (C/EBP BETA) (NUCLEAR FACTOR	568-595								
PCENB_HUMAN	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B).	433-460								
PCENC_HUMAN	CENTROMERE PROTEIN C (CENP-C) (CENTROMERE AUTOANTIGEN C).	372-399	493-520	553-607	715-752	767-825	850-884	903-947	963-993	1080-1107
PCENE_HUMAN	CENTROMERIC PROTEIN E (CENP-E PROTEIN).	1122-1149	1179-1239	1250-1277	1340-1367	1440-1481	1486-1556	1646-1680	1684-1724	1808-1846
		1832-1883	1890-1917	1940-1988	2021-2048	2288-2318	2440-2478	2498-2563		
PCERU_HUMAN	CERULOPLASMIN PRECURSOR (EC 1.16.3.1) (FERROXIDASE).	913-940								
PCETP_HUMAN	CHOLESTERYL ESTER TRANSFER PROTEIN PRECURSOR.	71-108								
PCFTR_HUMAN	CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR).	158-189	802-829	895-922	1243-1270					
PCGCC_HUMAN	CGMP-GATED CATION CHANNEL PROTEIN (CYCLIC NUCLEOTIDE	216-243								
PCGL_HUMAN	CYSTATHIONINE GAMMA-LYASE (EC 4.4.1.1).	315-349								
PCHLR_HUMAN	CHLORDECONE REDUCTASE (EC 1.1.1.225) (CDR).	17-51								
PCHOL_HUMAN	CHORIODERAEMIA-LIKE PROTEIN.	56-97	230-257	451-478						
PCHOR_HUMAN	CHORIODERAEMIA PROTEIN (TCD PROTEIN).	112-139								
PCINA_HUMAN	SODIUM CHANNEL PROTEIN, CARDIAC AND SKELETAL MUSCLE ALPHA-SUBUNIT.	787-814	943-970							
PCLCA_HUMAN	CLATHRIN LIGHT CHAIN A (BRAIN AND LYMPHOCYTE LCA).	121-148								
PCLCB_HUMAN	CLATHRIN LIGHT CHAIN B (BRAIN AND LYMPHOCYTE LCB).	123-157								
PCLCY_HUMAN	CALCYCLIN (PROLACTIN RECEPTOR ASSOCIATED PROTEIN) (PRA) (GROWTH	9-50								
PCLUS_HUMAN	CLUSTERIN PRECURSOR (COMPLEMENT-ASSOCIATED PROTEIN SP-40,40)	36-98	323-350	367-394						
PCMGA_HUMA	CHROMOGRANIN A PRECURSOR (CGA) (CONTAINS: PANCREASTATIN AND WE-14)	93-120	430-457							
PCNTF_HUMAN	CILIARY NEUROTROPHIC FACTOR (CNTF).	66-93								
PCO02_HUMAN	TUMOR-ASSOCIATED ANTIGEN CO-029.	29-56	95-148							
PCO3_HUMAN	COMPLEMENT C3 PRECURSOR.	242-276	593-620	837-867						
PCO4_HUMAN	COMPLEMENT C4 PRECURSOR.	1292-1319								
PCO5_HUMAN	COMPLEMENT C5 PRECURSOR.	298-342	537-564	970-997	1270-1304					
PCO6_HUMAN	COMPLEMENT C6 PRECURSOR.	367-398								
PCO7_HUMAN	COMPLEMENT C7 PRECURSOR.	223-261								

PCGENE	107x117bd Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN									
PCOX1_HUMAN	CYTOCHROME C OXIDASE POLYPEPTIDE I (EC 1.9.3.1).	353-380								
PCP70_HUMAN	CYTOCHROME P450 VII (CHOLESTEROL 7-ALPHA-MONOOXYGENASE)	263-290	346-373							
PCPCH_HUMAN	CYTOCHROME P450 IIC17 (EC 1.14.14.1) (P450-254C) (FRAGMENT).	109-136								
PCPE1_HUMAN	CYTOCHROME P450 IIE1 (EC 1.14.14.1) (P450-J) (ETHANOL INDUCIBLE).	231-258								
PCPSM_HUMAN	CARBAMOYL-PHOSPHATE SYNTHASE (AMMONIA) MITOCHONDRIAL PRECURSOR	1112-1146	420-447							
PCPT2_HUMAN	MITOCHONDRIAL CARNITINE PALMITOYLTRANSFERASE II PRECURSOR	410-437								
PCPT7_HUMAN	CYTOCHROME P450 XVIIA1 (P450-C17) (EC 1.14.99.9) (STEROID 17-ALPHA-	226-253								
PCPV1_HUMAN	CYTOCHROME P450 XIX A1 (AROMATASE) (EC 1.14.14.1) (ESTROGEN	234-271								
PCR3_HUMAN	COMPLEMENT RECEPTOR TYPE 3 PRECURSOR (CR3) (COMPLEMENT C3D RECEPTOR)	986-1013								
PCRCM_HUMAN	COLORECTAL MUTANT CANCER PROTEIN (MCC PROTEIN).	68-126	379-420	633-678	724-754	763-790				
PCREB_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEINS A AND B (CREB-A AND CREB-B).	94-123								
PCREP_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEIN CRE-BP1.	380-414								
PCRP_HUMAN	C-REACTIVE PROTEIN PRECURSOR.	60-87	150-177							
PCS1_HUMAN	CLEAVAGE SIGNAL-1 PROTEIN (CS-1).	203-233								
PCSF1_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR-1 PRECURSOR (CSF-1) (M-CSF).	143-170								
PCST3_HUMAN	CLEAVAGE STIMULATION FACTOR, 50 KD SUBUNIT (CSTF 50 KD SUBUNIT) (CF-1	6-33								
PCTNA_HUMAN	ALPHA-CATENIN (CADHERIN-ASSOCIATED PROTEIN).	681-718								
PCTNR_HUMAN	ALPHA-CATENIN RELATED PROTEIN (CATENIN ALPHA-2).	680-717								
PCX26_HUMAN	GAP JUNCTION BETA-2 PROTEIN (CONNEXIN 26) (CX26).	108-139								
PCX32_HUMAN	GAP JUNCTION BETA-1 PROTEIN (CONNEXIN 32) (CX32) (GAP JUNCTION 32 KD	117-144								
PCX37_HUMAN	GAP JUNCTION ALPHA-4 PROTEIN (CONNEXIN 37) (CX37)	88-115								
PCYB5_HUMAN	CYTOCHROME B5.	7-42								
PCYG1_HUMAN	GUANYLATE CYCLASE SOLUBLE, BETA-1 CHAIN (EC 4.6.1.2) (70 KD CHAIN)	80-107	126-153	352-396						
PCYG4_HUMAN	GUANYLATE CYCLASE SOLUBLE, ALPHA-2 CHAIN (EC 4.6.1.2).	106-133								
PCYGR_HUMAN	RETINAL GUANYLYL CYCLASE PRECURSOR (EC 4.6.1.2).	824-851								
PCYTO_HUMAN	CYTOXINE RECEPTOR COMMON GAMMA CHAIN PRECURSOR (GAMMA-C)	293-320								
PCYTA_HUMAN	CYSTATIN A (STEFIN A) (CYSTATIN A5).	37-58								
PDIL_HUMAN	PROTO-ONCOGENE DBL PRECURSOR (CONTAINS: MCF2)	213-283	485-524	766-793	801-845					
PDISM_HUMAN	DESMIN.	133-180	272-312							
PDISP_HUMAN	DESMOPLAKIN I AND II (DPI AND DPII) (FRAGMENT).	31-79	113-143	217-244	269-317	382-434	437-467	528-558	563-598	630-674
		697-734	738-789	1456-1493	1508-1535					
PDIAP_HUMAN	ALDEHYDE DEHYDROGENASE, DIMERIC NADP-PREFERRING (EC 1.2.1.3).	31-58								
PDMD_HUMAN	DYSTROPHIN.	86-116	338-365	484-511	753-780	976-1003	1012-1039	1201-1228	1364-1394	1615-1674
		1838-1865	2158-2185	2313-2343	3752-3779	3786-3830	2912-2938	3014-3041	3499-3533	
PDNJ1_HUMAN	DNAJ PROTEIN HOMOLOG.	45-76								
PDNL1_HUMAN	DNA LIGASE I (EC 6.5.1.1) (POLYDEOXYRIBONUCLEOTIDE SYNTHASE (ATP)).	110-157	355-392	732-759						
PDPOA_HUMAN	DNA POLYMERASE ALPHA (EC 2.7.7.7).	25-74	1009-1057	1100-1127						
PDPOD_HUMAN	DNA POLYMERASE DELTA CATALYTIC CHAIN (EC 2.7.7.7).	729-756								
PDPP4_HUMAN	DIPEPTIDYL PEPTIDASE IV (EC 3.4.14.5) (DPP IV) (T-CELL ACTIVATION	29-77	114-148							
PDRN1_HUMAN	DEOXYRIBONUCLEASE I PRECURSOR (EC 3.1.21.1) (DNASE I).	44-71								
PDSC2_HUMAN	DESMOCOLLIN 2A/2B PRECURSOR (DESMOSOMAL GLYCOPROTEIN II AND III).	80-107	355-398							
PDSG1_HUMAN	DESMOGLEIN I PRECURSOR (DESMOSOMAL GLYCOPROTEIN I) (DGI).	15-42	271-298	497-531						
PDSG3_HUMAN	DESMOGLEIN 3 PRECURSOR (130 KD PEMPHIGUS VULGARIS ANTIGEN) (PVA).	211-248	325-352							
PDUG_HUMAN	DIVERGENT UPSTREAM PROTEIN (DUP).	584-618								
PEAR1_HUMAN	V-ERBA RELATED PROTEIN EAR-1.	523-550								
PEBI2_HUMAN	EBV-INDUCED G PROTEIN-COUPLED RECEPTOR 2 (EBI2).	44-78								
PEF1B_HUMAN	ELONGATION FACTOR 1-BETA (EF-1-BETA).	105-132								
PEF1D_HUMAN	ELONGATION FACTOR 1-DELTA (EF-1-DELTA).	84-118								
PEGFR_HUMAN	EPIDERMAL GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	64-91	440-467							
PEGF_HUMAN	EPIDERMAL GROWTH FACTOR PRECURSOR, KIDNEY (EGF) (UROGASTRONE)	47-74								
PELF1_HUMAN	ETS-RELATED TRANSCRIPTION FACTOR ELF-1.	551-588								
PENPL_HUMAN	ENDOPLASMIN PRECURSOR (94 KD GLUCOSE-REGULATED PROTEIN) (GRP94) (GP96	47-74	246-273							
PENV1_HUMAN	RETROVIRUS-RELATED ENV POLYPROTEIN.	382-420								
PEPC_HUMAN	IG EPSILON CHAIN C REGION.	161-188								
PEPMO_HUMAN	EPIMORPHIN.	35-62	67-94	249-283						
PER72_HUMAN	PROTEIN DISULFIDE ISOMERASE-RELATED PROTEIN PRECURSOR (ERP72).	58-85	142-169	458-485						
PERC1_HUMAN	DNA EXCISION REPAIR PROTEIN ERCC-1.	240-270								



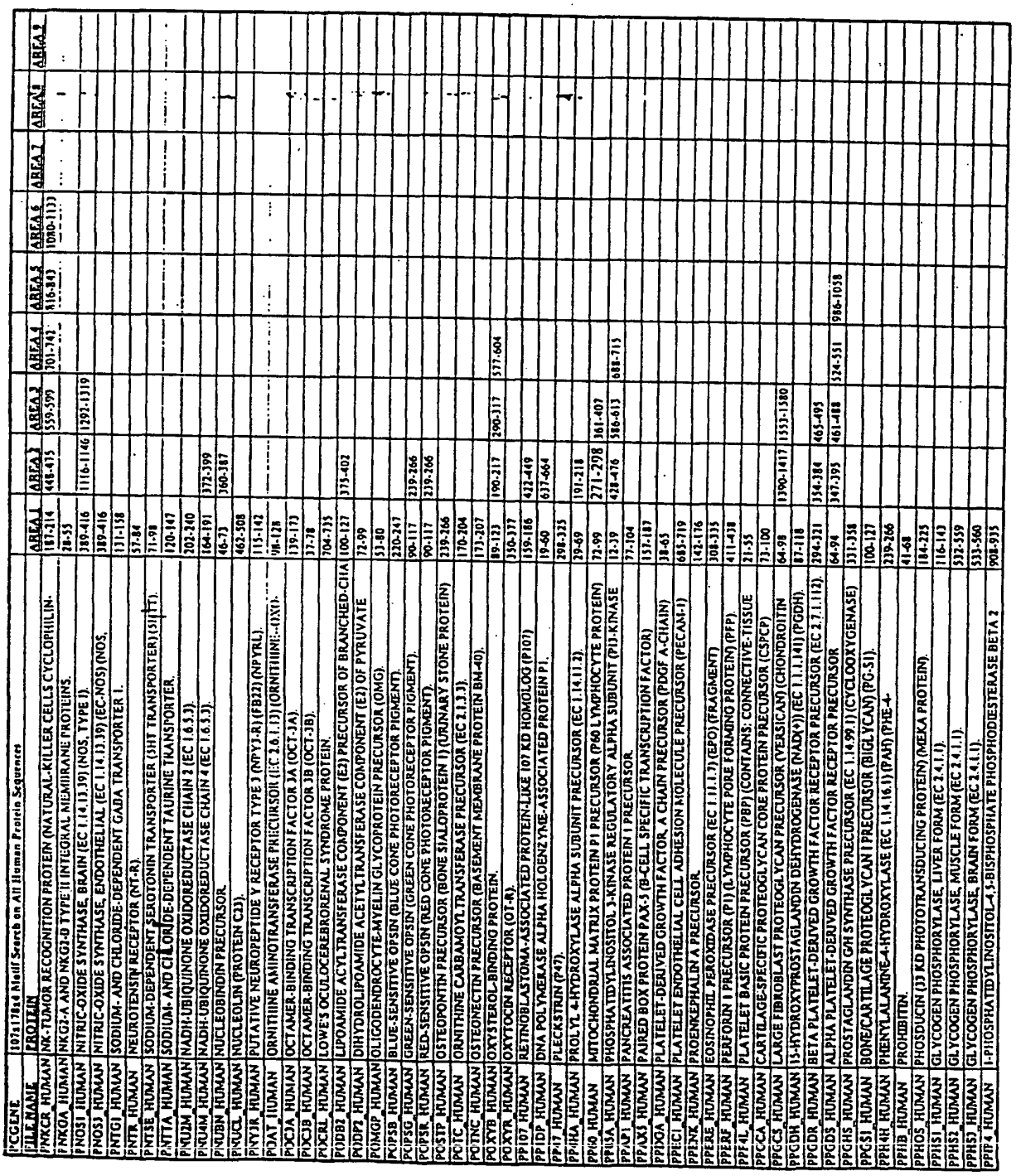
PCGENE	107s178r4 Motif Search on All Human Protein Sequence	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	160-209	939-973							
PERC6_HUMAN	EXCISION REPAIR PROTEIN ERCC-6	451-488								
PESTR_HUMAN	ESTROGEN RECEPTOR (ER).	133-160								
PET2_HUMAN	ENDOTHELIN-2 PRECURSOR (ET-2).	182-209								
PET3_HUMAN	ENDOTHELIN-3 PRECURSOR (ET-3).	29-56								
PEVIA_HUMAN	EVI2A PROTEIN PRECURSOR.	119-146	351-392	402-429	512-539					
PEZRI_HUMAN	EZRIN (P81) (CYTOVILLIN) (VILLIN-2).	2103-2137								
PFA3_HUMAN	COAGULATION FACTOR V PRECURSOR.	871-908	1007-1034	1194-1230						
PFA8_HUMAN	COAGULATION FACTOR VIII PRECURSOR (PROCOAGULANT COMPONENT).	271-298								
PFA9_HUMAN	COAGULATION FACTOR IX PRECURSOR (EC 3.4.21.22) (CHRISTMAS FACTOR).	98-125								
PFABI_HUMAN	FATTY ACID-BINDING PROTEIN, INTESTINAL.	23-50	249-301	306-333						
PFASA_HUMAN	APOPTOSIS-MEDIATING SURFACE ANTIGEN FAS PRECURSOR (APO-1 ANTIGEN).	81-115								
PFCE1_HUMAN	LOW AFFINITY IMMUNOGLOBULIN EPSILON FC RECEPTOR (LYMPHOCYTE IGE	140-174								
PFCEA_HUMAN	HIGH AFFINITY IMMUNOGLOBULIN EPSILON RECEPTOR ALPHA-SUBUNIT (FCERU	310-337								
PFGRO_HUMAN	FIBROBLAST GROWTH FACTOR RECEPTOR 2 PRECURSOR (EC 2.7.1.112).	131-165	427-457							
PFIBA_HUMAN	FIBRINOGEN ALPHA CHAIN PRECURSOR.	149-186								
PFIBB_HUMAN	FIBRINOGEN BETA CHAIN PRECURSOR.	59-93	125-160							
PFIBG_HUMAN	FIBRINOGEN GAMMA-A CHAIN PRECURSOR.	59-93	125-160							
PFIBH_HUMAN	FIBRINOGEN GAMMA-B CHAIN (FIBRINOGEN GAMMA').	2168-2199								
PFINC_HUMAN	FIBRONECTIN PRECURSOR.	172-209								
PFLI1_HUMAN	FLI-1 ONCOGENE (ERGB TRANSCRIPTION FACTOR).	184-218	256-283	301-328						
PFMO1_HUMAN	DIMETHYLANILINE MONOOXYGENASE (N-OXIDE FORMING) 3 (EC 1.14.13.8)	162-193								
PFOS_HUMAN	FBJ-C-FOS PROTO-ONCOGENE PROTEIN.	133-168								
PFRA1_HUMAN	FOS-RELATED ANTIGEN 1.	149-180								
PFRA2_HUMAN	FOS-RELATED ANTIGEN 2.	7-34								
PFRDH_HUMAN	FERRITIN HEAVY CHAIN.	7-34								
PFRIL_HUMAN	FERRITIN LIGHT CHAIN.	3-33								
PFSHR_HUMAN	FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R).	364-395								
PFUCO_HUMAN	TISSUE ALPHA-L-FUCOSIDASE PRECURSOR (EC 3.2.1.51) (ALPHA-L-FUCOSIDASE	308-335								
PFUMH_HUMAN	FUMARATE HYDRATASE, MITOCHONDRIAL (EC 4.2.1.2) (FUMARASE).	424-451								
PG0S2_HUMAN	PUTATIVE LYMPHOCYTE G0/G1 SWITCH PROTEIN.	56-83								
PG19P_HUMAN	PROTEIN KINASE C SUBSTRATE, 80 KD PROTEIN, HEAVY CHAIN (PKCSH)	146-177								
PG6PI_HUMAN	GLUCOSE-6-PHOSPHATE ISOMERASE (GPI) (EC 5.3.1.9) (PHOSPHOGLUCOSE	16-50								
PG7J2_HUMAN	MAJOR GASTROINTESTINAL TUMOR-ASSOCIATED PROTEIN GA733-2 PRECURSOR	181-215								
PGA12_HUMAN	GALACTOKINASE 2 (EC 2.7.1.6).	234-281								
PGAA1_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-1 SUBUNIT PRECURSOR (GABA(A	210-237								
PGAA3_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-3 SUBUNIT PRECURSOR (GABA(A	211-255								
PGASR_HUMAN	GASTRIN/CHOLECYSTOKININ TYPE B RECEPTOR (CCK-B RECEPTOR).	75-103								
PGB01_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 1.	22-49								
PGB02_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 2.	22-49								
PGBAK_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(K), ALPHA SUBUNIT (G(I) ALPHA-3).	22-49								
PGBAS_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE	7-34								
PGBAY_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(Y), ALPHA SUBUNIT (ALPHA-11)	95-122								
PGBBJ_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(I)/G(S)/G(T) BETA SUBUNIT 3	65-92								
PGBLP_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUBUNIT-LIKE PROTEIN 12.3.	110-137	255-282	289-316						
PGBP2_HUMAN	INTERFERON-INDUCED GUANYLATE-BINDING PROTEIN 2 (GUANINE NUCLEOTIDE-	434-488								
PGBT1_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(T), ALPHA-2 SUBUNIT (TRANSDUCIN	22-49								
PGCF_HUMAN	GC-RICH SEQUENCE DNA-BINDING FACTOR (GCF) (TRANSCRIPTION FACTOR 9)	200-227	293-320	367-394	396-423	647-674				
PGCH1_HUMAN	GTP CYCLOHYDROLASE I (EC 3.5.4.16).	165-192								
PGCRA_HUMAN	GLUCOCORTICOID RECEPTOR, ALPHA (GR).	167-194								
PGCRB_HUMAN	GLUCOCORTICOID RECEPTOR, BETA (GR).	167-194								
PGCSP_HUMAN	GLYCINE DEHYDROGENASE (DECARBOXYLATING) PRECURSOR (EC 1.4.4.2)	460-487								
PGDN_HUMAN	GLIA DERIVED NEXIN (GDN) (PROTEASE NEXIN I).	83-110								
PGEL5_HUMAN	GELSOLIN PRECURSOR, PLASMA (ACTIN-DEPOLYMERIZING FACTOR) (ADF)	701-728								
PGFAP_HUMAN	GLIAL FIBRILLARY ACIDIC PROTEIN, ASTROCYTE.	189-216	349-376	384-411						
PGL6S_HUMAN	N-ACETYLGLUCOSAMINE-6-SULFATASE PRECURSOR (EC 3.1.6.14) (G6S)	170-221								
PGLPK_HUMAN	GLYCEROL KINASE (EC 2.7.1.30) (ATP:GLYCEROL 3-PHOSPHOTRANSFERASE)	78-112	231-278							
PGLY1_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, CYTOSOLIC (EC 2.1.2.1) (SERINE	32-59	344-371							

PCGENE	10/1/18d Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN									
PGLY2_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, MITOCHONDRIAL (EC 2.1.2.1) (SERINE	417-444								
PGRP1_HUMAN	78 KD GLUCOSE REGULATED PROTEIN PRECURSOR (GRP 78) (IMMUNOGLOBULIN	564-591	598-635							
PGRA2_HUMAN	GLYCINE RECEPTOR ALPHA-2 CHAIN PRECURSOR.	142-169	341-368							
PGRAV_HUMAN	GRAVIN (FRAGMENT).	9-43	61-88							
PGRFR_HUMAN	GROWTH HORMONE-RELEASING HORMONE RECEPTOR PRECURSOR (GRH RECEPT	128-155								
PGTH2_HUMAN	GLUTATHIONE S-TRANSFERASE HA SUBUNIT 2 (EC 2.5.1.18) (GTH2) (CLASS-	64-91								
PGTPA_HUMAN	GTPASE-ACTIVATING PROTEIN (GAP) (RAS P21 PROTEIN ACTIVATOR).	474-501	1012-1047							
PGTR1_HUMAN	GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN.	274-301								
PGTR3_HUMAN	GLUCOSE TRANSPORTER TYPE 3, BRAIN.	272-299								
PGTR4_HUMAN	GLUCOSE TRANSPORTER TYPE 4, INSULIN-RESPONSIVE.	290-317								
PH10_HUMAN	HISTONE H1°.	44-89								
PH1A_HUMAN	HISTONE H1A (H1.1).	133-104								
PH1B_HUMAN	HISTONE H1B (H1.4).	70-101								
PH1C_HUMAN	HISTONE H1C (H1.2).	71-103								
PH1D_HUMAN	HISTONE H1D (H1.3).	70-101								
PH1T_HUMAN	HISTONE H1T.	74-105								
PH2B0_HUMAN	HISTONE H2B 1.	20-47								
PH2B3_HUMAN	HISTONE H2B 2.	20-47								
PH2B_HUMAN	HISTONE H2B (H2B.1 A).	20-47								
PHA35_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DQ(3) ALPHA CHAIN PRECURSOR	142-169								
PHB3K_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR-W3) BETA CHAIN PRECURSOR.	36-83								
PHB4P_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(W4) BETA CHAIN PRECURSOR.	30-77								
PHB5Q_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(W2) BETA CHAIN PRECURSOR.	30-77								
PHB5S_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, 5B BETA CHAIN (FRAGMENT).	16-43								
PHBG1_HUMAN	HEPARIN-BINDING GROWTH FACTOR PRECURSOR 1 (HBGF-1) (ACIDIC FIBROBLAST	102-129								
PHBG3_HUMAN	INT-2 PROTO-ONCOGENE PROTEIN PRECURSOR (HBGF-3).	61-91								
PHBG6_HUMAN	FIBROBLAST GROWTH FACTOR-6 PRECURSOR (FGF-6) (HBGF-6) (HST-2).	41-75	159-186							
PHBI_HUMAN	P59 PROTEIN (HSP BINDING IMMUNOPHILIN) (HBI) (POSSIBLE PEPTIDYL-PROLYL	264-312								
PHEM4_HUMAN	UROPORPHYRINOGEN-III SYNTHASE (EC 4.2.1.75) (UROPORPHYRINOGEN-III	24-118								
PHEP2_HUMAN	HEPARIN COFACTOR II PRECURSOR (HC-II) (PROTEASE INHIBITOR LEUSERPIN 2)	169-196								
PHEP5_HUMAN	SERINE PROTEASE HEPSIN (EC 3.4.21.-).	22-49								
PHEXA_HUMAN	BETA-HEXOSAMINIDASE ALPHA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-	356-383								
PHEXB_HUMAN	BETA-HEXOSAMINIDASE BETA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-BETA-	388-415								
PHGX1_HUMAN	HOMEOBOX PROTEIN MSX-1 (HOX-7).	178-212								
PHNFA_HUMAN	HEPATOCYTE NUCLEAR FACTOR 1-ALPHA (HNF-1A) (LIVER SPECIFIC	2-29								
PHO1_HUMAN	HEME OXYGENASE 1 (EC 1.14.99.3) (HO-1).	197-224								
PHPPD_HUMAN	4-HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD).	306-333								
PHX7_HUMAN	ZINC FINGER PROTEIN HOX.	521-548	914-974	1637-1666	2213-2286	2289-2316	3317-3344	3448-3475		
PHS1_HUMAN	HEMATOPOIETIC LINEAGE CELL SPECIFIC PROTEIN.	43-70								
PHS9A_HUMAN	HEAT SHOCK PROTEIN HSP 90-ALPHA (HSP 86).	443-470	640-674							
PHSER_HUMAN	HEAT-STABLE ENTEROTOXIN RECEPTOR PRECURSOR (GC-C) (INTESTINAL	511-545								
PHSF1_HUMAN	HEAT SHOCK FACTOR PROTEIN 1 (HSF 1) (HEAT SHOCK TRANSCRIPTION FACTOR	113-140	168-209							
PHSF2_HUMAN	HEAT SHOCK FACTOR PROTEIN 2 (HSF 2) (HEAT SHOCK TRANSCRIPTION FACTOR	117-198								
PHV21_HUMAN	1G HEAVY CHAIN PRECURSOR V-1J REGION (AXH-77).	67-108								
PHV2T_HUMAN	1G HEAVY CHAIN V-1J REGION (GAL).	47-74								
PHX11_HUMAN	HOMEOBOX PROTEIN HOX-11 (TCL-3 PROTO-ONCOGENE).	262-289								
PHX2B7_HUMAN	HOMEOBOX PROTEIN HOX-B7 (HOX-2C) (HHO.C1).	135-162								
PIAPP_HUMAN	ISLET AMYLOID POLYPEPTIDE	53-80								
PIBP3_HUMAN	INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3 PRECURSOR (IGFBP-3)	183-210								
PIC1_HUMAN	PLASMA PROTEASE C1 INHIBITOR PRECURSOR (C1 INH).	251-278								
PICA2_HUMAN	INTERCELLULAR ADHESION MOLECULE-2 PRECURSOR (ICAM-2).	57-84								
PIDE_HUMAN	INSULIN-DEGRADING ENZYME (EC 3.4.99.45) (INSULINASE) (INSULIN	474-504	907-941							
PIF4I_HUMAN	EUKARYOTIC INITIATION FACTOR 4A-I (EIF-4A-I).	232-259	322-349							
PIF4B_HUMAN	INTRINSIC FACTOR PRECURSOR (IF) (GASTRIC INTRINSIC FACTOR).	149-176	406-433							
PIF_HUMAN	INHIBIN BETA A CHAIN PRECURSOR (ACTIVIN BETA-A CHAIN) (ERYTHROID	308-349								
PIFNA_HUMAN	INTERLEUKIN-1 ALPHA PRECURSOR (IL-1 ALPHA) (HEMATOPOIETIN-1).	80-107	183-210							
PIL1A_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	76-110	172-199							

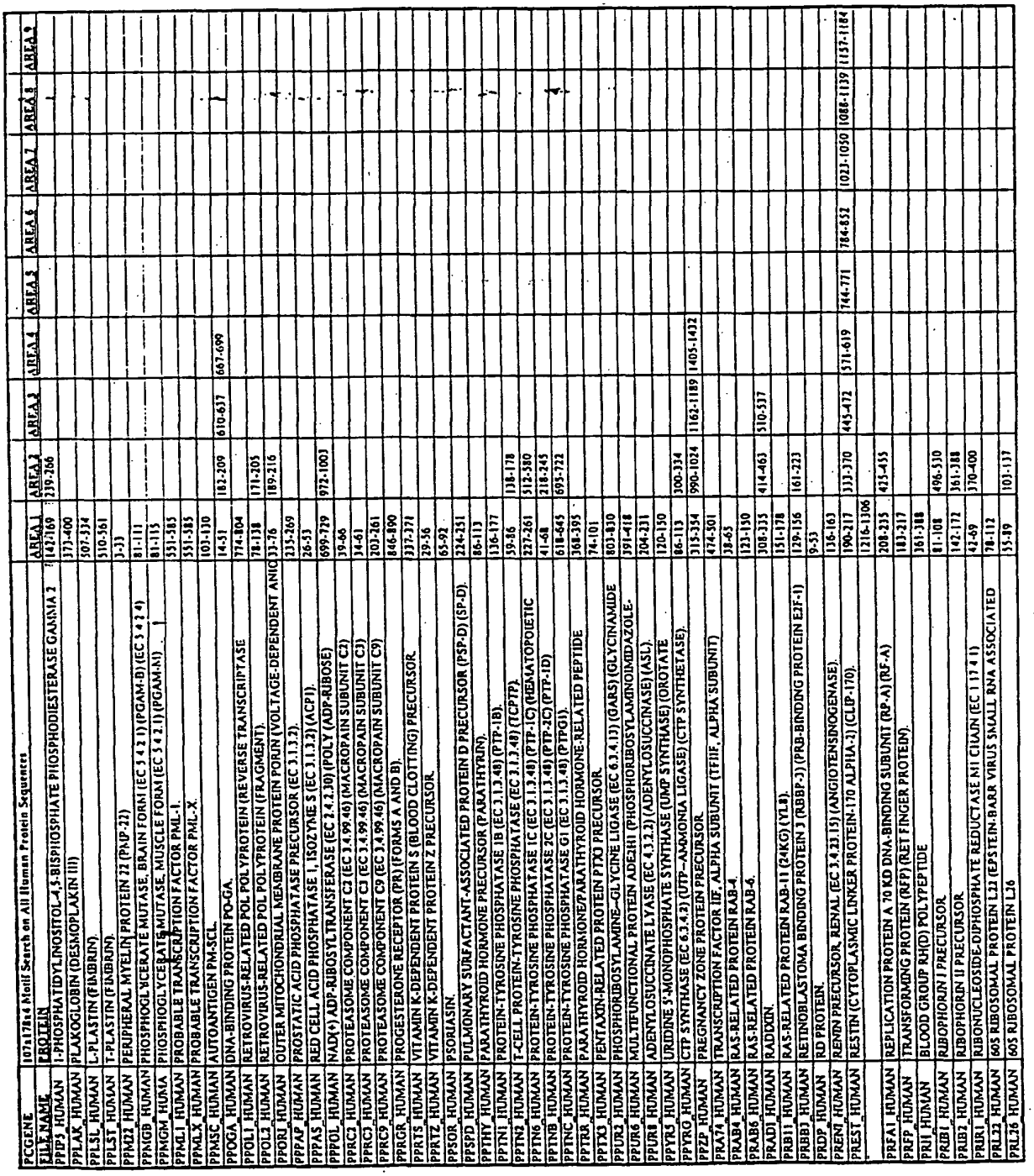
PCGENE	107x178x4 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN									
PIL1R_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	437-467								
PIL1S_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE II PRECURSOR (IL-1R2).	159-186								
PIL3R_HUMAN	INTERLEUKIN-3 RECEPTOR ALPHA CHAIN PRECURSOR (IL-3R-ALPHA).	87-114								
PIL6_HUMAN	INTERLEUKIN-6 PRECURSOR (IL-6) (B-CELL STIMULATORY FACTOR 2) (BSF-2)	112-139								
PINA1_HUMAN	INTERFERON ALPHA-1 PRECURSOR.	94-121								
PINAR_HUMAN	INTERFERON/ALPHA RECEPTOR PRECURSOR (IFN-ALPHA-REC).	90-117	164-191	300-327	508-535					
PINB_HUMAN	INTERFERON BETA PRECURSOR (FIBROBLAST).	88-129								
PINI1_HUMAN	INTERFERON-INDUCED 17 KD PROTEIN (CONTAINS: INTERFERON-INDUCED 15 KD	83-121								
PINI6_HUMAN	INTERFERON-INDUCED 56 KD PROTEIN (IFI-56K).	51-78	216-245	393-430						
PINSR_HUMAN	INSULIN RECEPTOR PRECURSOR (EC 2.7.1.112) (IR).	592-619								
PINVO_HUMAN	INVOLUCRIN.	119-146	229-233	326-363	386-450					
PIPJK_HUMAN	ID-MYO-INOSITOL-TRISPHOSPHATE 3-KINASE A (EC 2.7.1.127) (INOSITOL	121-162								
PIPSP_HUMAN	PLASMA SERINE PROTEASE (PROTEIN C) INHIBITOR PRECURSOR (PCI)	90-117	206-233							
PIRBP_HUMAN	INTERPHOTORECEPTOR RETINOID-BINDING PROTEIN PRECURSOR (IRBP)	670-697								
PIRF3_HUMAN	INTERFERON REGULATORY FACTOR 2 (IRF-2).	157-193								
PIT3P_HUMAN	75 KD INOSITOL-1,4,5-TRISPHOSPHATE 3-PHOSPHATASE PRECURSOR	235-262								
PITA2_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IA PRECURSOR (GPIA) (COLLAGEN RECEPT	879-906	900-927							
PITA5_HUMAN	FIBRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-F)	250-284	637-695	765-792						
PITA6_HUMAN	INTEGRIN ALPHA-6 PRECURSOR (VLA-6) (INTEGRIN ALPHA-E) (CD49F).	884-911	944-974							
PITAL_HUMAN	LEUKOCYTE ADHESION GLYCOPROTEIN LFA-1 ALPHA CHAIN PRECURSOR (LEUKOC	356-383	795-822							
PITAM_HUMAN	CELL SURFACE GLYCOPROTEIN MAC-1 ALPHA SUBUNIT PRECURSOR (CR-3 ALPHA	1044-1078								
PITAV_HUMAN	VITRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-V)	210-264								
PITB1_HUMAN	FIBRONECTIN RECEPTOR BETA SUBUNIT PRECURSOR (INTEGRIN BETA-1) (CD29)	218-245	334-399							
PITB2_HUMAN	CELL SURFACE ADHESION GLYCOPROTEINS LFA-1, CR3 AND P150,95, BETA-	339-366	705-732							
PITB3_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IIIA PRECURSOR (GPIIIA) (INTEGRIN BETA-	324-351								
PITB4_HUMAN	INTEGRIN BETA-4 SUBUNIT PRECURSOR (GP150).	342-369								
PITB5_HUMAN	INTEGRIN BETA-5 SUBUNIT PRECURSOR.	224-251								
PITB6_HUMAN	INTEGRIN BETA-6 SUBUNIT PRECURSOR.	311-338	352-393							
PITB8_HUMAN	INTEGRIN BETA-8 SUBUNIT PRECURSOR.	362-399	696-737							
PITI2_HUMAN	INTER-ALPHA-TRYPSIN INHIBITOR COMPLEX COMPONENT II PRECURSOR.	134-161	425-452	772-818						
PK1C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 10 (CYTOKERATIN 10) (K10).	154-187	196-227	337-399	428-462					
PK1CM_HUMAN	KERATIN, TYPE I CYTOSKELETAL 13 (CYTOKERATIN 13) (K13).	112-142								
PK1CN_HUMAN	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14).	122-152	306-335	393-424						
PK1CO_HUMAN	KERATIN, TYPE I CYTOSKELETAL 15 (CYTOKERATIN 15) (K15).	113-143								
PK1CP_HUMAN	KERATIN, TYPE I CYTOSKELETAL 16 (CYTOKERATIN 16) (K16).	308-339								
PK1CQ_HUMAN	KERATIN, TYPE I CYTOSKELETAL 17 (CYTOKERATIN 17) (K17).	122-152	302-346	393-431						
PK1CR_HUMAN	KERATIN, TYPE I CYTOSKELETAL 18 (CYTOKERATIN 18) (K18).	87-114	251-298	337-385						
PK1CS_HUMAN	KERATIN, TYPE I CYTOSKELETAL 19 (CYTOKERATIN 19) (K19).	88-118	317-362	370-397						
PK2C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 1 (CYTOKERATIN 1) (K1) (CYTOSKELETAL 67	196-226	346-384	390-467						
PK2C3_HUMAN	KERATIN, TYPE II CYTOSKELETAL 65 KD.	215-248	364-405	461-488						
PK2C4_HUMAN	KERATIN, TYPE II CYTOSKELETAL 4 (CYTOKERATIN 4) (K4) (FRAGMENT).	42-73	126-153	189-248						
PK2C5_HUMAN	KERATIN, TYPE II CYTOSKELETAL 5 (CYTOKERATIN 5) (K5) (58 KD	185-246	332-373							
PK2C6_HUMAN	KERATIN, TYPE II CYTOSKELETAL 6 (CYTOKERATIN 6) (K6B KERATIN).	178-239	325-366	422-449						
PK2C8_HUMAN	KERATIN, TYPE II CYTOSKELETAL 8 (CYTOKERATIN 8) (K8).	140-167								
PK2CA_HUMAN	KERATIN, TYPE II CYTOSKELETAL 56 KD (K6A KERATIN) (FRAGMENT).	7-34	120-161	217-244						
PK6PF_HUMAN	6-PHOSPHOFRUCTOKINASE, MUSCLE TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	140-167								
PK6PL_HUMAN	6-PHOSPHOFRUCTOKINASE, LIVER TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	49-80	128-159							
PKABL_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE ABL (EC 2.7.1.112) (P150)	498-525								
PKAC_HUMAN	IG KAPPA CHAIN C REGION.	37-85								
PKALM_HUMAN	KALLMANN SYNDROME PROTEIN PRECURSOR (ADHESION MOLECULE-LIKE X-LINK	380-414								
PKAPA_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-ALPHA REGULATORY CHAIN	179-206								
PKAP1_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-BETA REGULATORY CHAIN	177-204								
PKAP2_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE II-ALPHA REGULATORY CHAIN	175-202	290-317							
PKBF1_HUMAN	NUCLEAR FACTOR KAPPA-B SUBUNIT-1 (NF-KAPPA-B P105 SUBUNIT)	529-570								
PKCRB_HUMAN	CREATINE KINASE, B CHAIN (EC 2.7.3.2).	101-128								
PKECK_HUMAN	TYROSINE PROTEIN-KINASE ECK PRECURSOR (EC 2.7.1.112) (EPITHELIAL CELL	466-493								
PKFER_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FER (EC 2.7.1.112) (P94-FER)	219-246	364-391							

PCGENE [07:17:32 Prd Motif Search on All Human Protein Sequences]		AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
NAME	PROTEIN									
PKFES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FES/FPS (EC 2.7.1.112) (C-FES).	101-145	295-322							
PKFLT_HUMAN	RECEPTOR-RELATED TYROSINE KINASE FLT PRECURSOR (EC 2.7.1.112).	208-235	319-353							
PKFMS_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR 1 RECEPTOR PRECURSOR (CSF-1-R)	291-320								
PKFYN_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FYN (EC 2.7.1.112) (P59-FYN)	199-233								
PKGPB_HUMAN	CGMP-DEPENDENT PROTEIN KINASE, BETA ISOZYME (CGK) (EC 2.7.1.37).	17-54								
PKHEK_HUMAN	TYROSINE KINASE HEK RECEPTOR PRECURSOR (EC 2.7.1.112).	646-673								
PKHH_HUMAN	KINESIN HEAVY CHAIN.	125-155	425-452	471-542	633-680	689-716	872-899			
PKIT_HUMAN	KIT PROTO-ONCOGENE TYROSINE KINASE PRECURSOR (EC 2.7.1.112).	235-263								
PKMET_HUMAN	HEPATOCYTE GROWTH FACTOR RECEPTOR PRECURSOR (MET PROTO-ONCOGENE	898-925								
PKNI_HUMAN	KININOGEN, HMW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR)	505-532								
PKP19_HUMAN	GALACTOSYLTRANSFERASE ASSOCIATED PROTEIN KINASE P59/GTA (EC 2.7.1.-).	81-108								
PKP68_HUMAN	INTERFERON-INDUCED, DOUBLE-STRANDED RNA-ACTIVATED PROTEIN KINASE	149-179	191-225	285-312						
PKPTB_HUMAN	PUTATIVE SERINE/THREONINE-PROTEIN KINASE PTB (EC 2.7.1.-).	582-609								
PKPCL_HUMAN	PROTEIN KINASE C, ETA TYPE (EC 2.7.1.-) (NPKC-ETA) (PKC-L).	318-345								
PKPT1_HUMAN	SERINE/THREONINE-PROTEIN KINASE PCTAIRE-1 (EC 2.7.1.-).	149-176	209-253							
PKPY1_HUMAN	PYRUVATE KINASE, M1 (MUSCLE) ISOZYME (EC 2.7.1.40) (CYTOSOLIC THYROID	243-289								
PKPY2_HUMAN	PYRUVATE KINASE, M2 ISOZYME (EC 2.7.1.40).	243-289								
PKPYR_HUMAN	PYRUVATE KINASE, ISOZYME R (EC 2.7.1.40).	2-29								
PKRET_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE RET (EC 2.7.1.112).	183-217								
PKROS_HUMAN	ROS PROTO-ONCOGENE TYROSINE KINASE (EC 2.7.1.112) (FRAGMENT).	157-203								
PKSRC_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE SRC (EC 2.7.1.112) (P60-SRC)	143-170								
PKUT_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P70 (70 KD SUBUNIT OF KU ANTIGEN).	335-379								
PKUX6_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P86 (86 KD SUBUNIT OF KU ANTIGEN).	258-292								
PKYES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE YES (EC 2.7.1.112) (P61-YES)	209-243								
PLAM1_HUMAN	LAMIN B1.	32-66	117-144	152-193	214-241	397-424	480-507	510-539		
PLAMA_HUMAN	LAMIN A (70 KD LAMIN).	32-88	114-165	293-343						
PLAMC_HUMAN	LAMIN C.	32-88	114-165	293-343						
PLAR_HUMAN	LAR PROTEIN PRECURSOR (LEUKOCYTE ANTIGEN RELATED) (EC 3.1.3.48).	935-969								
PLA_HUMAN	LUPUS LA PROTEIN (SJOGREN SYNDROME TYPE B ANTIGEN (SS-B)).	191-222	295-342							
PLCAT_HUMAN	PHOSPHATIDYLCHOLINE-STEROL ACYLTRANSFERASE PRECURSOR (EC 2.3.1.43)	131-158								
PLDBH_HUMAN	L-LACTATE DEHYDROGENASE H CHAIN (EC 1.1.1.27) (LDH-B).	81-108	302-329							
PLDBM_HUMAN	L-LACTATE DEHYDROGENASE M CHAIN (EC 1.1.1.27) (LDH-A).	225-252								
PLDLR_HUMAN	LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR.	483-510								
PLEC1_HUMAN	ASIALOGLYCOPROTEIN RECEPTOR 1 (HEPATIC LECTIN H1) (ASGPR).	62-96								
PLEM3_HUMAN	P-SELECTIN PRECURSOR (GRANULE MEMBRANE PROTEIN 140) (GMP-140) (PADGEM)	32-59	87-116							
PLGUL_HUMAN	LACTOYLGLUTATHIONE LYASE (EC 4.4.1.5) (METHYLGLYOXALASE)	83-117								
PLIF_HUMAN	LEUKAEMIA INHIBITORY FACTOR PRECURSOR (LIF) (DIFFERENTIATION-	95-122								
PLIN1_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG.	152-179	332-363	398-358	671-698	874-901	1036-1066			
PLIPO_HUMAN	TRIACYLGLYCEROL LIPASE PRECURSOR (EC 3.1.1.3) (LIPASE, GASTRIC).	158-185								
PLIPS_HUMAN	HORMONE SENSITIVE LIPASE (EC 3.1.1.-) (HSL).	305-332								
PLKHA_HUMAN	LEUKOTRIENE A-4 HYDROLASE (EC 3.3.2.6) (LTA-4 HYDROLASE) (LEUKOTRIENE	42-83	290-324							
PLMA_HUMAN	LAMININ A CHAIN PRECURSOR.	1318-1345	1741-1771	1785-1812	1824-1851	1884-1921	1965-1999	2026-2059	2091-2118	
PLMB1_HUMAN	LAMININ B1 CHAIN PRECURSOR.	1267-1314	1364-1394	1597-1631	1651-1714	1722-1781				
PLMB2_HUMAN	LAMININ B2 CHAIN PRECURSOR.	1103-1135	1513-1547							
PLMP2_HUMAN	LYSOSOME-ASSOCIATED MEMBRANE GLYCOPROTEIN 2 PRECURSOR (LAMP-2).	155-182								
PLOX2_HUMAN	ARACHIDONATE 12-LIPOXYGENASE (EC 1.13.11.31) (12-LOX).	341-368								
PLOX5_HUMAN	ARACHIDONATE 5-LIPOXYGENASE (EC 1.13.11.34) (5-LIPOXYGENASE) (5-LO).	50-87								
PLPH_HUMAN	LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62).	776-803								
PLPTB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE BETA PRECURSOR (EC 3.1.3.48) (PTP-BETA).	140-167	389-617							
PLRPG_HUMAN	PROTEIN-TYROSINE PHOSPHATASE GAMMA PRECURSOR (EC 3.1.3.48)	1081-1108								
PLRPZ_HUMAN	PROTEIN-TYROSINE PHOSPHATASE ZETA PRECURSOR (EC 3.1.3.48) (PTP-ZETA).	553-587	1024-1051	1973-2000						
PLSHR_HUMAN	LUTROPIN-CHORIOGONADOTROPIC HORMONE RECEPTOR PRECURSOR (LH/CG-R)	66-114	448-480							
PLV1B_HUMAN	IG LAMBDA CHAIN V-II REGION (NEI).	61-88								
PLYAG_HUMAN	LYSOSOMAL ALPHA-GLUCOSIDASE PRECURSOR (EC 3.2.1.20) (ACID MALTASE).	885-912								
PM2OM_RUMA	MITOCHONDRIAL 2-OXOGLUTARATE/MALATE CARRIER PROTEIN (OGCP).	50-77								
PMAG1_HUMAN	GALACTOSE-SPECIFIC LECTIN (MAC-2 ANTIGEN) (IGE-BINDING PROTEIN) (35 KD	219-246								
PMAN9_HUMAN	MAN(9)-ALPHA-MANNOSIDASE (EC 3.2.1.-).	414-441								

PCGENE	10?a17Bx4 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
ENTRY NAME	PROTEIN									
PMANA_HUMA	MANNOSE-6-PHOSPHATE ISOMERASE (EC 5.3.1.8) (PHOSPHOMANNOSE ISOMERASE)	60-87								
PMANR_HUMA	MACROPHAGE MANNOSE RECEPTOR PRECURSOR.	248-284	1147-1182							
PMAP2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 2 (FRAGMENT).	434-478								
PMAP4_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 4.	408-449								
PMAX_HUMAN	MAX PROTEIN.	117-144								
PMDM2_HUMA	MDM2 PROTEIN (P53-ASSOCIATED PROTEIN).	235-288								
PMDR1_HUMAN	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1).	561-595								
PMERL_HUMAN	MERLIN (SCHWANNOMIN).	377-407	332-366							
PMERO_HUMAN	MEROSIN HEAVY CHAIN (LAMININ CHAIN A2) (FRAGMENT).	71-105	139-173	431-458	791-818					
PMGMT_HUMA	METHYLATED-DNA--PROTEIN-CYSTEINE METHYLTRANSFERASE (EC 2.1.1.63) (6-O-	91-118								
PMKLP_HUMAN	MITOTIC KINESIN-LIKE PROTEIN-1.	207-234	319-346	510-537	549-608					
PMLCH_HUMAN	MELANIN-CONCENTRATING HORMONE PRECURSOR.	8-35								
PMLK1_HUMAN	MIXED LINEAGE KINASE 1 (EC 2.7.1.-) (FRAGMENT).	130-157	321-348							
PMMSA_HUMA	METHYLMALONATE-SEMIALDEHYDE DEHYDROGENASE	193-420								
PMOES_HUMAN	MOESIN (MEMBRANE-ORGANIZING EXTENSION SPIKE PROTEIN).	119-146	331-403							
PMPCP_HUMAN	MITOCHONDRIAL PHOSPHATE CARRIER PROTEIN PRECURSOR.	286-313								
PMPI3_HUMAN	M-PHASE INDUCER PHOSPHATASE 3 (EC 3.1.3.48).	72-99								
PMPKK_HUMAN	DUAL SPECIFICITY MITOGEN-ACTIVATED PROTEIN KINASE KINASE (EC 2.7.1.-)	19-50								
PMPRU_HUMAN	CATION-INDEPENDENT MANNOSE-6-PHOSPHATE RECEPTOR PRECURSOR (CI MAN-6-	1569-1596	2437-2478							
PMRP_HUMAN	MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN.	396-423	507-548							
PMSHR_HUMAN	MELANOCYTE STIMULATING HORMONE RECEPTOR (MSH-R) (MELANOTROPIN	38-65								
PMSRE_HUMAN	MACROPHAGE SCAVENGER RECEPTOR TYPES I AND II (MACROPHAGE ACETYLATED	173-204	230-260							
PMTDM_HUMA	DNA (CYTOSINE-5)-METHYLTRANSFERASE (EC 2.1.1.37) (DNA	387-414	601-628							
PMTF1_HUMAN	MITOCHONDRIAL TRANSCRIPTION FACTOR 1 PRECURSOR (MTTF1).	181-212								
PMUTA_HUMAN	METHYLMALONYL-COA MUTASE PRECURSOR (EC 5.4.99.2) (MCM).	468-519								
PMX1_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXA (INTERFERON-	108-150								
PMXQ_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXB (P78-RELATED	431-489	670-697							
PMYBA_HUMA	MYB-RELATED PROTEIN A (FRAGMENT).	619-646								
PMYBB_HUMAN	MYB-RELATED PROTEIN B.	87-117								
PMYCN_HUMA	N-MYC PROTO-ONCOGENE PROTEIN.	263-300	413-461							
PMYC_HUMAN	MYC PROTO-ONCOGENE PROTEIN.	393-422								
PMYF4_HUMAN	MYOGENIC FACTOR MYF-4 (MYOGENIN).	119-146								
PMYF5_HUMAN	MYOGENIC FACTOR MYF-5.	121-148								
PMYP2_HUMAN	MYELIN P2 PROTEIN.	70-110								
PMYPR_HUMAN	MYELIN PROTEOLIPID PROTEIN (PLP) (LIPOPHILIN) (CONTAINS: MYELIN	43-70								
PMYSA_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE ALPHA ISOFORM (FRAGMENT).	38-75	84-111	137-178	226-324	398-435	440-485			
PMYSB_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE BETA ISOFORM.	48-75	931-981	997-1044	1088-1122	1192-1234	1266-1332	1360-1408	1442-1479	1488-1532
		1541-1582	1640-1681	1683-1710	1801-1838					
PMYSE_HUMAN	MYOSIN HEAVY CHAIN, FAST SKELETAL MUSCLE, EMBRYONIC.	46-73	860-903	953-1077	1119-1146	1193-1235	1267-1340	1364-1411	1483-1597	1641-1675
		1707-1734	1827-1858							
PMYSP_HUMAN	MYOSIN HEAVY CHAIN, PERINATAL CARDIAC MUSCLE (FRAGMENT).	50-77	95-125	141-188	215-272	403-483	507-552	586-624	685-736	784-818
		823-907	946-987	1049-1076						
PMYSS_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (FRAGMENT).	133-160	193-280	304-349	423-460	468-526	581-608	645-681	743-798	808-835
			846-873							
PMYT1_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT).	640-678								
PNACA_HUMAN	SODIUM/CALCIUM EXCHANGER PRECURSOR (NA+/CA2+-EXCHANGE PROTEIN).	492-519	594-621	705-735						
PNCA2_HUMAN	NEURAL CELL ADHESION MOLECULE, PHOSPHATIDYLINOSITOL-LINKED ISOFORM	235-282								
PNCF1_HUMAN	NEUTROPHIL CYTOSOL FACTOR 1 (NCF-47K) (47 KD AUTOSOMAL CHRONIC	224-261	310-337							
PNCF2_HUMAN	NEUTROPHIL NADPH OXIDASE FACTOR (P67-PHOX).	5-32								
PNEFA_HUMAN	DNA-BINDING PROTEIN NEFA PRECURSOR.	50-77	82-112	343-395						
PNEP_HUMAN	NEPRILYSIN (EC 3.4.24.11) (NEUTRAL ENDOPEPTIDASE) (NEP)	170-216	644-671							
PNF1_HUMAN	NEUROFIBROMIN (NEUROFIBROMATOSIS-RELATED PROTEIN NF-1) (FRAGMENT).	1145-1172	1388-1422	1639-1666						
PNFH_HUMAN	NEUROFILAMENT TRIPLET H PROTEIN (200 KD NEUROFILAMENT PROTEIN) (NF-H).	91-128	431-490							
PNFL_HUMAN	NEUROFILAMENT TRIPLET L PROTEIN (68 KD NEUROFILAMENT PROTEIN) (NF-L).	92-126	441-468							
PNFM_HUMAN	NEUROFILAMENT TRIPLET M PROTEIN (160 KD NEUROFILAMENT PROTEIN) (NF-M).	101-141	164-194	215-280	315-372	737-764	794-826	872-913		
PNK1R_HUMAN	SUBSTANCE-P RECEPTOR (SPR) (NK-1 RECEPTOR) (NK-1R).	338-365								
PNK4_HUMAN	NATURAL KILLER CELLS PROTEIN 4 PRECURSOR.	166-193								



!*CGENE	10/21/98d Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN									
PNKCR_HUMAN	NK-TUMOR RECOGNITION PROTEIN (NATURAL-KILLER CELLS CYCLOPHILIN-	187-214	448-475	559-599	701-741	816-843	1050-1133			
PNKOA_HUMAN	NKG2-A AND NKG2-B TYPE II INTEGRAL MEMBRANE PROTEINS.	28-55								
PNOS1_HUMAN	NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I).	389-416	1116-1146	1292-1319						
PNOS3_HUMAN	NITRIC-OXIDE SYNTHASE, ENDOTHELIAL (EC 1.14.13.39) (EC-NOS) (NOS,	389-416								
PNTG1_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT GABA TRANSPORTER 1.	131-158								
PNTR_HUMAN	NEUROTENSIN RECEPTOR (NT-R).	57-84								
PNTSE_HUMAN	SODIUM-DEPENDENT SEROTONIN TRANSPORTER (SHT TRANSPORTER) (SHTT).	71-98								
PNTTA_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT TAURINE TRANSPORTER.	120-147								
PNUIM_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 2 (EC 1.6.5.3).	202-240								
PNUIM_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4 (EC 1.6.5.3).	164-191	372-399							
PNUBN_HUMAN	NUCLEOBINDIN PRECURSOR.	46-73	360-387							
PNUCL_HUMAN	NUCLEOLIN (PROTEIN C23).	462-508								
PNTYR_HUMAN	PUTATIVE NEUROPEPTIDE Y RECEPTOR TYPE 3 (NPY3-R) (FB22) (NPYRL).	115-142								
PNAT_HUMAN	ORNITHINE AMINOTRANSFERASE PRECURSOR (EC 2.6.1.13) (ORNITHINE--OXO-	98-128								
PNCIA_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 1A (OCT-1A).	139-173								
PNCIB_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 1B (OCT-1B).	37-78								
PNCRL_HUMAN	LOWE'S OCULOCEREBRORENAL SYNDROME PROTEIN.	704-735								
PNDB1_HUMAN	LIPOAMIDE ACYLTRANSFERASE COMPONENT (E2) PRECURSOR OF BRANCHED-CHA	100-127	375-402							
PNDP2_HUMAN	DIHYDROLIPOAMIDE ACETYLTRANSFERASE COMPONENT (E2) OF PYRUVATE	72-99								
PNMGP_HUMAN	OLIGODENDROCYTE-MYELIN GLYCOPROTEIN PRECURSOR (OMG).	53-80								
PNPSB_HUMAN	BLUE-SENSITIVE OPSIN (BLUE CONE PHOTORECEPTOR PIGMENT).	220-247								
PNPSG_HUMAN	GREEN-SENSITIVE OPSIN (GREEN CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
PNPSR_HUMAN	RED-SENSITIVE OPSIN (RED CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
PNSTP_HUMAN	OSTEOPONTIN PRECURSOR (BONE SIALOPROTEIN I) (URINARY STONE PROTEIN)	239-266								
PNTC_HUMAN	ORNITHINE CARBAMOYLTRANSFERASE PRECURSOR (EC 2.1.3.3).	170-204								
PNTNC_HUMAN	OSTEONECTIN PRECURSOR (BASEMENT MEMBRANE PROTEIN BM-40).	173-207								
PNXYB_HUMAN	OXYSTEROL-BINDING PROTEIN.	89-133	190-217	290-317	577-604					
PNXYR_HUMAN	OXYTOCIN RECEPTOR (OT-R).	350-377								
PP107_HUMAN	RETINOBLASTOMA-ASSOCIATED PROTEIN-LIKE 107 KD HOMOLOG (P107)	159-186	432-449							
PPIDP_HUMAN	DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1.	19-60	637-664							
PP17_HUMAN	PLECKSTRIN (P47).	298-325								
PP4HA_HUMAN	PROLYL 4-HYDROXYLASE ALPHA SUBUNIT PRECURSOR (EC 1.14.11.2).	29-69	191-218							
PPH0_HUMAN	MITOCHONDRIAL MATRIX PROTEIN P1 PRECURSOR (P60 LYMPHOCYTE PROTEIN)	72-99	271-298	361-407						
PPI5A_HUMAN	PHOSPHATIDYLINOSITOL 3-KINASE REGULATORY ALPHA SUBUNIT (P13-KINASE	12-39	428-476	586-613	688-715					
PPJ01_HUMAN	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR.	77-104								
PPJX1_HUMAN	PAIRED BOX PROTEIN PAX-5 (B-CELL SPECIFIC TRANSCRIPTION FACTOR)	137-187								
PPIXA_HUMAN	PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)	38-65								
PPIEC1_HUMAN	PLATELET ENDOTHELIAL CELL ADHESION MOLECULE PRECURSOR (PECAM-1)	685-719								
PPIFK_HUMAN	PROENKEPHALIN A PRECURSOR.	142-176								
PPERE_HUMAN	EOSINOPHIL PEROXIDASE PRECURSOR (EC 1.11.1.7) (EPO) (FRAGMENT)	308-335								
PPERF_HUMAN	PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP).	411-438								
PPF4L_HUMAN	PLATELET BASIC PROTEIN PRECURSOR (PBP) (CONTAINS: CONNECTIVE-TISSUE	21-55								
PPGCA_HUMAN	CARTILAGE-SPECIFIC PROTEOGLYCAN CORE PROTEIN PRECURSOR (CSPCP)	73-100								
PPGCS_HUMAN	LARGE FIBROBLAST PROTEOGLYCAN PRECURSOR (VERSICAN) (CHONDROITIN	64-98	1390-1417	1533-1580						
PPGDH_HUMAN	15-HYDROXYPROSTAGLANDIN DEHYDROGENASE (NAD(+)) (EC 1.1.1.141) (PGDH).	87-118								
PPGDR_HUMAN	BETA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	294-321	354-384	465-493						
PPGDS_HUMAN	ALPHA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR	64-94	347-395	461-488	524-551	986-1038				
PPGH5_HUMAN	PROSTAGLANDIN G/H SYNTHASE PRECURSOR (EC 1.14.99.1) (CYCLOOXYGENASE)	331-358								
PPGS1_HUMAN	BONE/CARTILAGE PROTEOGLYCAN I PRECURSOR (BIGLYCAN) (PG-51).	100-127								
PPH4H_HUMAN	PHENYLALANINE-4-HYDROXYLASE (EC 1.14.16.1) (PAH) (PHE-4-	239-266								
PPIIB_HUMAN	PROHIBITIN.	41-68								
PPHOS_HUMAN	PHOSDUCIN (33 KD PHOTOTRANSDUCING PROTEIN) (MEKA PROTEIN).	184-225								
PPH1S1_HUMAN	GLYCOGEN PHOSPHORYLASE, LIVER FORM (EC 2.4.1.1).	116-143								
PPH1S2_HUMAN	GLYCOGEN PHOSPHORYLASE, MUSCLE FORM (EC 2.4.1.1).	532-559								
PPH1S3_HUMAN	GLYCOGEN PHOSPHORYLASE, BRAIN FORM (EC 2.4.1.1).	533-560								
PPIP4_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE BETA 2	908-935								



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FILE NAME	PROTEIN								
PPD1_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE GAMMA 2	142-169	239-286						
PPLAK_HUMAN	PLAKOGLOBIN (DESMOPLAKIN III)	173-400							
PPLSL_HUMAN	L-PLASTIN (FIMBRIN).	307-334							
PPLST_HUMAN	T-PLASTIN (FIMBRIN).	310-361							
PPMD2_HUMAN	PERIPHERAL MYELIN PROTEIN 22 (PMP-22)	3-33							
PPMGB_HUMAN	PHOSPHOGLYCERATE MUTASE, BRAIN FORM (EC 5.4.2.1) (PGAM-B) (EC 5.4.2.4)	81-111							
PPMGM_HUMA	PHOSPHOGLYCERATE MUTASE, MUSCLE FORM (EC 5.4.2.1) (PGAM-M)	81-115							
PPML1_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-1.	551-585							
PPMLX_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-X.	551-585							
PPMSC_HUMAN	AUTOANTIGEN PM-SCL.	103-130							
PPOGA_HUMAN	DNA-BINDING PROTEIN PO-GA.	14-51	182-209	610-637	667-699				
PPOL1_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE	774-804							
PPOL2_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (FRAGMENT).	78-138	171-205						
PPORU_HUMAN	OUTER MITOCHONDRIAL MEMBRANE PROTEIN PORIN (VOLTAGE-DEPENDENT ANIO	33-76	189-216						
PPPAP_HUMAN	PROSTATIC ACID PHOSPHATASE PRECURSOR (EC 3.1.3.2).	235-269							
PPPAS_HUMAN	RED CELL ACID PHOSPHATASE 1, ISOZYME S (EC 3.1.3.2) (ACP1).	26-53							
PPPOL_HUMAN	NAD(+) ADP-RIBOSYLTRANSFERASE (EC 2.4.2.30) (POLY (ADP-RIBOSE)	699-729	972-1003						
PPRC1_HUMAN	PROTEASOME COMPONENT C1 (EC 3.4.99.46) (MACROPAIN SUBUNIT C1)	39-66							
PPRC3_HUMAN	PROTEASOME COMPONENT C3 (EC 3.4.99.46) (MACROPAIN SUBUNIT C3)	34-61							
PPRC9_HUMAN	PROTEASOME COMPONENT C9 (EC 3.4.99.46) (MACROPAIN SUBUNIT C9)	203-261							
PPRGR_HUMAN	PROGESTERONE RECEPTOR (PR) (FORMS A AND B).	846-890							
PPRTS_HUMAN	VITAMIN K-DEPENDENT PROTEIN S (BLOOD CLOTTING) PRECURSOR.	337-371							
PPRTZ_HUMAN	VITAMIN K-DEPENDENT PROTEIN Z PRECURSOR.	29-56							
PPSOR_HUMAN	PSORIASIN.	65-92							
PPSPD_HUMAN	PULMONARY SURFACTANT-ASSOCIATED PROTEIN D PRECURSOR (PSP-D) (SP-D).	224-251							
PPTHY_HUMAN	PARATHYROID HORMONE PRECURSOR (PARATHYRIN).	86-113							
PPTN1_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1B (EC 3.1.3.48) (PTP-1B).	136-177							
PPTN2_HUMAN	T-CELL PROTEIN-TYROSINE PHOSPHATASE (EC 3.1.3.48) (TCPTP).	59-86	138-178						
PPTN6_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1C (EC 3.1.3.48) (PTP-1C) (HEMATOPOIETIC	227-261	512-580						
PPTNB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 2C (EC 3.1.3.48) (PTP-2C) (PTP-1D)	41-68	218-245						
PPTNC_HUMAN	PROTEIN-TYROSINE PHOSPHATASE G1 (EC 3.1.3.48) (PTPG1).	618-645	695-722						
PPTRA_HUMAN	PARATHYROID HORMONE/PARATHYROID HORMONE-RELATED PEPTIDE	368-395							
PPTX3_HUMAN	PENTAXIN-RELATED PROTEIN PTX3 PRECURSOR.	74-101							
PPUR2_HUMAN	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE (EC 6.3.4.13) (GARS) (GLYCINAMIDE	803-830							
PPUR6_HUMAN	MULTIFUNCTIONAL PROTEIN ADE2H1 (PHOSPHORIBOSYLAMINOIMIDAZOLE-	391-418							
PPUR8_HUMAN	ADENYLOSUCCINATE LYASE (EC 4.3.2.2) (ADENYLOSUCCINASE) (ASL).	204-231							
PPYR5_HUMAN	URIDINE 5'-MONOPHOSPHATE SYNTHASE (UMP SYNTHASE) (OROTATE	120-150							
PPYRO_HUMAN	CTP SYNTHASE (EC 6.3.4.2) (UTP--AMMONIA LIGASE) (CTP SYNTHETASE).	86-113	300-334						
PPZP_HUMAN	PREGNANCY ZONE PROTEIN PRECURSOR.	315-354	990-1024	1162-1189	1405-1432				
PRA74_HUMAN	TRANSCRIPTION FACTOR IIE, ALPHA SUBUNIT (TFIIE, ALPHA SUBUNIT)	474-501							
PRAB4_HUMAN	RAS-RELATED PROTEIN RAB-4.	38-65							
PRAB6_HUMAN	RAS-RELATED PROTEIN RAB-6.	123-150							
PRADI_HUMAN	RADIXIN.	308-335	414-463	510-537					
PRB11_HUMAN	RAS-RELATED PROTEIN RAB-11 (24KG) (YL8).	151-178							
PRBB1_HUMAN	RETINOBLASTOMA BINDING PROTEIN 1 (RBBP-1) (PRB-BINDING PROTEIN E2F-1)	129-156	161-223						
PRDP_HUMAN	RD PROTEIN.	9-53							
PREN1_HUMAN	RENIN PRECURSOR, RENAL (EC 3.4.23.15) (ANGIOTENSINOGENASE).	136-163							
PREST_HUMAN	RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170).	190-217	333-370	445-472	571-619	744-771	784-852	(1021-1059	1088-1139 1137-1184
		1216-1306							
PRFA1_HUMAN	REPLICATION PROTEIN A 70 KD DNA-BINDING SUBUNIT (RP-A) (RF-A)	208-235	423-455						
PRFP_HUMAN	TRANSFORMING PROTEIN (RFP) (RET FINGER PROTEIN).	183-217							
PRIJ_HUMAN	BLOOD GROUP RH(D) POLYPEPTIDE	361-388							
PRIB1_HUMAN	RIBOPHORIN I PRECURSOR.	81-108	496-530						
PRIB2_HUMAN	RIBOPHORIN II PRECURSOR.	142-172	361-388						
PRIR1_HUMAN	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE M1 CHAIN (EC 1.17.4.1)	43-69	370-400						
PRL23_HUMAN	60S RIBOSOMAL PROTEIN L23 (EPSTEIN-BARR VIRUS SMALL RNA ASSOCIATED	78-112							
PRL26_HUMAN	60S RIBOSOMAL PROTEIN L26	55-89	103-137						

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRL9_HUMAN	60S RIBOSOMAL PROTEIN L9.	146-192							1	
PRLA0_HUMAN	60S ACIDIC RIBOSOMAL PROTEIN P0 (L10E).	138-185								
PRO1_HUMAN	52 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	190-233	238-285							
PRO6_HUMAN	60 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	192-245								
PROC_HUMAN	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HNRNP C1 AND HNRNP	16-43								
PROL_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN L (HNRNPL).	501-528								
PROU_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN U.	630-657								
PRPB1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 215 KD POLYPEPTIDE	269-296	665-720	879-906	1314-1341	1371-1398				
PRPB1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 140 KD POLYPEPTIDE	626-667	1008-1035							
PRPDJ_HUMAN	DNA-DIRECTED RNA POLYMERASE II 33 KD POLYPEPTIDE	242-274								
PRRXA_HUMAN	RETINOIC ACID RECEPTOR RXR-ALPHA.	318-352							1	
PRRXB_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 1	376-403								
PRRXC_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 2	396-423								
PRS12_HUMAN	40S RIBOSOMAL PROTEIN S12.	60-87								
PRS16_HUMAN	40S RIBOSOMAL PROTEIN S16	89-116							1	
PRS25_HUMAN	40S RIBOSOMAL PROTEIN S25.	26-53								
PRS27_HUMAN	40S RIBOSOMAL PROTEIN S27A	14-41								
PRS27_HUMAN	40S RIBOSOMAL PROTEIN S7 (S8)	73-100								
PRS8_HUMAN	40S RIBOSOMAL PROTEIN S8	116-161							1	
PRTC1_HUMAN	RAS-LIKE PROTEIN TC21	123-150								
PRU1A_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A (U1 SNRNP A PROTEIN)	13-47								
PRU2B_HUMAN	U2 SMALL NUCLEAR RIBONUCLEOPROTEIN B"	17-46								
PRYR_HUMAN	RYANODINE RECEPTOR, SKELETAL MUSCLE	154-188	495-532	866-893	2750-2777	2820-2847	3304-3331	3529-3556	3912-3939	4921-4948
PS10A_HUMAN	S-100 PROTEIN, ALPHA CHAIN	12-54								
PS10B_HUMAN	S-100 PROTEIN, BETA CHAIN	14-56							1	
PS10D_HUMAN	S-100D PROTEIN.	31-58								
PSAHH_HUMAN	ADENOSYLHOMOCYSTEINASE (EC 3.3.1.1) (S-ADENOSYL-L-HOMOCYSTEINE	389-416							1	
PSAT1_HUMAN	DNA-BINDING PROTEIN SATB1.	709-736								
PSCCA_HUMAN	SQUAMOUS CELL CARCINOMA ANTIGEN (SCCA) (PROTEIN T4-A)	78-105								
PSCF_HUMAN	STEM CELL FACTOR PRECURSOR (SCF)	74-101								
PSEM1_HUMAN	SEMENOGELIN I PROTEIN PRECURSOR (SGI) (CONTAINS: SEMINAL BASIC	64-91	176-226	288-329	334-368				4	
PSEM2_HUMAN	SEMENOGELIN II PRECURSOR (SGII)	71-98	183-226	304-355	405-439	539-575			4	
PSET_HUMAN	SET PROTEIN.	38-65	154-181							
PSG1_HUMAN	SECRETOGRANIN I PRECURSOR (CHROMOGRANIN B)	144-178								
PSG2_HUMAN	SECRETOGRANIN II PRECURSOR (CHROMOGRANIN C).	254-281	290-317	334-361						
PSIAL_HUMAN	BONE SIALOPROTEIN II PRECURSOR (BSP II).	84-111	135-189	236-283						
PSN1L_HUMAN	POSSIBLE GLOBAL TRANSCRIPTION ACTIVATOR SNF2L.	231-258	545-572							
PSNOB_HUMAN	SKI-RELATED ONCOGENE SNON.	414-441								
PSPCA_HUMAN	SPECTRIN ALPHA CHAIN.	193-220	570-621	655-712	1099-1126	1461-1502	1882-1909	1988-2022	2120-2154	2223-2250
		2346-2373								
PSPCB_HUMAN	SPECTRIN BETA CHAIN, ERYTHROCYTE.	150-177	316-350	486-520	648-675	987-1021	1027-1081	1287-1324	1347-1374	1834-1861
PSPRE_HUMAN	SEPIAPTERIN REDUCTASE (EC 1.1.1.153) (SPR).	90-124								
PSRF_HUMAN	SERUM RESPONSE FACTOR (SRF).	77-104	480-507							
PSRPR_HUMAN	SIGNAL RECOGNITION PARTICLE RECEPTOR ALPHA SUBUNIT (SR-ALPHA)	76-110								
PSSR1_HUMAN	SOMATOSTATIN RECEPTOR TYPE 1.	289-316								
PSTHA_HUMAN	STATHMIN (PHOSPHOPROTEIN P19) (ONCOPROTEIN P18) (LEUKEMIA-ASSOCIATED	47-74								
PSUIS_HUMAN	SUCRASE-ISOMALTASE, INTESTINAL (EC 3.2.1.48) / (EC 3.2.1.10).	1748-1775								
PSYB1_HUMAN	SYNAPTOBREVIN 1.	31-67								
PSYDJ_HUMAN	ASPARTYL-TRNA SYNTHETASE ALPHA-2 SUBUNIT (EC 6.1.1.12) (ASPARTATE-	44-71								
PSYEP_HUMAN	MULTIFUNCTIONAL AMINOACYL-TRNA SYNTHETASE (CONTAINS: GLUTAMYL-TRN	174-201	740-771							
PSYH_HUMAN	HISTIDYL-TRNA SYNTHETASE (EC 6.1.1.21) (HISTIDINE--TRNA LIGASE).	380-442	468-502							
PSYTI_HUMAN	SYNAPTOTAGMIN I (P65).	140-167	230-277							
PSYTC_HUMAN	THREONYL-TRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE--TRNA	497-524	638-685							
PSYV_HUMAN	VALYL-TRNA SYNTHETASE (EC 6.1.1.9) (VALINE--TRNA LIGASE) (VALRS).	230-257	413-440							
PSYW_HUMAN	TRYPTOPHANYL-TRNA SYNTHETASE (EC 6.1.1.2) (TRYPTOPHAN--TRNA LIGASE)	93-127	196-223							
PTFEB_HUMAN	TRANSCRIPTION INITIATION FACTOR IIE-BETA CHAIN (TFIIE-BETA).	34-68								
PTAP4_HUMAN	TRANSCRIPTION FACTOR AP-4 (FRAGMENT).	169-196	245-272							

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PTAPB_HUMAN	TRANSCRIPTION FACTOR JUN-B.	296-333							1	
PTAPD_HUMAN	TRANSCRIPTION FACTOR JUN-D.	291-333								
PTAU1_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU.	278-305								
PTAU2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU, FETAL	211-238								
PTCO1_HUMAN	TRANSCOBALAMIN I PRECURSOR.	201-241	330-357							
PTCP1_HUMAN	T-COMPLEX PROTEIN 1 (TCP-1).	316-343								
PTDT_HUMAN	DNA NUCLEOTIDYLEXOTRANSFERASE (EC 2.7.7.31) (TERMINAL ADDITION ENZYME)	61-95								
PTEK_HUMAN	RECEPTOR TYROSINE PROTEIN KINASE TEK PRECURSOR (EC 2.7.1.112) (HTK-0).	644-678	960-996	1007-1036						
PTFIB_HUMAN	TRANSCRIPTION INITIATION FACTOR IIB (TFIID	135-162								
PTFE1_HUMAN	TRANSCRIPTION FACTOR E1 (FRAGMENT).	43-70	122-149	178-226						
PTFS2_HUMAN	TRANSCRIPTION ELONGATION FACTOR S-II.	29-56							1	
PTF_HUMAN	TISSUE FACTOR PRECURSOR (TF) (COAGULATION FACTOR III).	148-175								
PTGF1_HUMAN	TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1).	148-185								
PTGF2_HUMAN	TRANSFORMING GROWTH FACTOR BETA 2 PRECURSOR (TGF-BETA 2) (GLIOBLASTO	241-278								
PTGFA_HUMAN	TRANSFORMING GROWTH FACTOR ALPHA PRECURSOR (TGF-ALPHA) (EGF-LIKE TGF	87-114								
PTGLK_HUMAN	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE K (EC 2.3.2.13)	258-285								
PTHBS_HUMAN	THROMBOSPONDIN PRECURSOR.	110-165	284-314							
PTHIK_HUMAN	3-KETOACYL-COA THIOLASE PEROXISOMAL PRECURSOR (EC 2.3.1.16) (BETA-	185-212								
PTKNB_HUMAN	PROTACHYKININ BETA PRECURSOR (CONTAINS: SUBSTANCE P, NEUROKININ A	11-38								
PTLE1_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 1.	626-653								
PTLE2_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 2.	94-125								
PTLE4_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 4 (FRAGMENT).	304-331								
PTOPA_HUMAN	DNA TOPOISOMERASE II, ALPHA ISOZYME (EC 5.99.1.3).	19-46	303-332							
PTOPB_HUMAN	DNA TOPOISOMERASE II, BETA ISOZYME (EC 5.99.1.3).	35-65	616-647							
PTPA1_HUMAN	TROPOMYOSIN, FIBROBLAST ISOFORM TM1.	16-74	82-116							
PTPA1A_HUMAN	TROPOMYOSIN ALPHA CHAIN, SKELETAL MUSCLE.	16-43	47-74	82-116	147-174	191-237	243-277			
PTPA1B_HUMAN	TROPOMYOSIN BETA CHAIN, SKELETAL MUSCLE.	37-116	193-240						1	
PTPMC_HUMAN	TROPOMYOSIN ALPHA CHAIN, CARDIAC MUSCLE	16-74	82-116	193-237						
PTPMF_HUMAN	TROPOMYOSIN, FIBROBLAST AND EPITHELIAL MUSCLE-TYPE (TM30) (TME1)	37-116	210-240	243-270						
PTPMG_HUMAN	TROPOMYOSIN, FIBROBLAST NON-MUSCLE TYPE (TM30PL).	46-80	111-138	158-199	207-234					
PTPNI_HUMAN	TROPOMYOSIN, CYTOSKELETAL TYPE (TM30NM)	46-80	111-138	172-199					1	
PTPNS_HUMAN	TROPOMYOSIN ALPHA CHAIN, SMOOTH MUSCLE (FRAGMENT).	25-59	147-178							
PTPP2_HUMAN	TRIPEPTIDYL-PEPTIDASE II (EC 3.4.14.10) (TPP II) (TRIPEPTIDYL	133-187	1004-1031	1160-1187						
PTPR_HUMAN	TPR ONCOGENE (FRAGMENT).	82-147								
PTRJ6_HUMAN	TREB36 PROTEIN.	18-45	242-269							
PTRFR_HUMAN	THYROTROPIN-RELEASING HORMONE RECEPTOR (TRH-R) (THYROLIBERIN	349-383								
PTRIC_HUMAN	TROPONIN I, CARDIAC MUSCLE.	36-63								
PTRKA_HUMAN	HIGH AFFINITY NERVE GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112)	66-93	117-148							
PTRSR_HUMAN	TRANSFERRIN RECEPTOR PROTEIN (TR) (ANTIGEN CD71) (T9)	188-215	366-393							
PTSHR_HUMAN	THYROTROPIN RECEPTOR PRECURSOR (TSH-R).	87-117	420-447							
PTTK_HUMAN	PROTEIN KINASE TKK (EC 2.7.1.-).	170-197	324-359	510-544	549-583					
PTYK2_HUMAN	NON-RECEPTOR TYROSINE-PROTEIN KINASE TYK2 (EC 2.7.1.112)	150-177								
PUBA1_HUMAN	UBIQUITIN-ACTIVATING ENZYME E1 (A1S9 PROTEIN)	448-475								
PUBF1_HUMAN	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1).	227-254								
PUDP0_HUMAN	UDP-GLUCURONOSYLTRANSFERASE PRECURSOR, MICROSOMAL (EC 2.4.1.17)	227-254								
PUFO_HUMAN	RECEPTOR TYROSINE-PROTEIN KINASE UFO PRECURSOR (EC 2.7.1.112)	488-522								
PUSF1_HUMAN	UPSTREAM STIMULATORY FACTOR 1.	251-295								
PVATC_HUMAN	VACUOLAR ATP SYNTHASE SUBUNIT C (EC 3.6.1.34) (V-ATPASE C SUBUNIT).	47-74	117-147							
PVIL1_HUMAN	VILLIN.	338-372	427-461	717-744						
PVIME_HUMAN	VIMENTIN.	119-146	233-260							
PVINC_HUMAN	VINCULIN.	108-135								
PVPRT_HUMAN	RETROVIRUS-RELATED PROTEASE (EC 3.4.23.-).	95-134								
PWEE1_HUMAN	WEE1-LIKE PROTEIN KINASE (EC 2.7.1.112)	334-388								
PWT1_HUMAN	WILMS' TUMOR PROTEIN (WT33).	247-274								
PXBP1_HUMAN	X BOX BINDING PROTEIN-1 (XBP-1) (TREB5 PROTEIN)	97-135								
PXPAC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-A CELLS (XERODERMA PIGMENTOSUM	180-211								
PXPCC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM	134-168	701-728							

PCGENE	107x1784 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN									
PXPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM	264-291								
PXPGC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-G CELLS (XERODERMA PIGMENTOSUM	83-110	715-766	1047-1081						
PXRCC_HUMAN	DNA-REPAIR PROTEIN XRCC1.	23-57								
PZN10_HUMAN	ZINC FINGER PROTEIN 10 (ZINC FINGER PROTEIN KOX1) (FRAGMENT).	29-56								
PZN40_HUMAN	ZINC FINGER PROTEIN 40 (HUMAN IMMUNODEFICIENCY VIRUS TYPE I ENHANCER-	17-62	307-334	1071-1098	1461-1500	2013-2057	2146-2180			
PZN45_HUMAN	ZINC FINGER PROTEIN 45 (UBC1744) (FRAGMENT).	3-30	201-228							
PZN46_HUMAN	ZINC FINGER PROTEIN 46 (ZINC FINGER PROTEIN KUP).	121-149								

TABLE X

SEARCH RESULTS SUMMARY FOR PCTLZIP, P1CTLZIP, AND P2CTLZIP MOTIFS

FOR ILLUSTRATIVE PURPOSES ONLY

P1CTLZIP		P1CTLZIP					P2CTLZIP		
LIBRARY FILE		LIBRARY FILE					LIBRARY FILE		
PENV_FOAMV	401-406	PENV_BIV06	434-460				PENV_BIV06	625-642	
PENV_HV1MA	438-463	PENV_BIV27	463-479				PENV_BIV27	654-671	
PENV_HV1MP	183-198	PENV_FOAMV	481-486	864-880			PENV_FENV1	30-47	830-847
PENV_HV1RH	445-460	PENV_HV1KB	752-768				PENV_FIVPE	781-788	
PENV_HV1QC	186-201	PENV_HV1MA	437-453				PENV_FIV8D	778-786	
PENV_HV1Z2	123-138	PENV_HV1MP	183-198				PENV_FIVT2	780-797	
PENV_HV1ZH	438-463	PENV_HV1RH	444-460				PENV_FLVC6	30-55	824-841
PENV_HV2BE	760-765	PENV_HV1B1	738-754				PENV_FLVGL	605-622	
PENV_HV2D1	741-756	PENV_HV1QC	186-201				PENV_FLVLB	626-642	
PENV_HV2G1	741-756	PENV_HV1Z2	123-138				PENV_FLVBA	602-619	
PENV_HV2N2	742-757	PENV_HV1Z3	117-133				PENV_FOAMV	710-727	857-874
PENV_HV2RO	761-780	PENV_HV1ZH	437-453				PENV_F8VGA	626-642	
PENV_HV2SB	743-758	PENV_HV2BE	750-765				PENV_F8VGB	605-622	
PENV_HV2ST	746-760	PENV_HV2D1	741-756				PENV_F8VBM	608-625	
PENV_J9RV	104-119	PENV_HV2G1	741-756				PENV_HV1OY	123-140	
PENV_MMTV8	618-633	PENV_HV2N2	742-757				PENV_HV1Z2	410-427	
PENV_MMTVG	618-633	PENV_HV2RO	761-780				PENV_HV1Z3	154-171	
PENV_BIVMK	138-154	PENV_HV2SB	743-758				PENV_HV2CA	760-787	
PENV_BIVML	138-154	PENV_HV2ST	746-780				PENV_MCFF	600-617	
PHEMA_CVBLY	381-406	PENV_J8RV	104-119	541-557			PENV_MCFF3	601-618	
PHEMA_CVBM	381-406	PENV_MCFF	387-413				PENV_MLVAV	630-647	
PHEMA_CVBQ	381-406	PENV_MCFF3	387-413				PENV_MLVCB	625-642	
PHEMA_CVHOC	381-406	PENV_MLVAV	427-443				PENV_MLVF5	638-656	
PHEMA_CVMA5	402-417	PENV_MLVCB	422-438				PENV_MLVFF	639-656	
PHEMA_CVMS	403-418	PENV_MLVHO	423-439				PENV_MLVFP	638-656	
PHEMA_INBAA	286-310	PENV_MLVMO	426-442				PENV_MLVHO	626-643	
PHEMA_INBBE	303-318	PENV_MLVRD	424-440				PENV_MLVKI	107-184	
PHEMA_INBBO	283-308	PENV_MLVRK	424-440				PENV_MLVMO	628-646	
PHEMA_INBEN	301-316	PENV_MMTV8	618-633				PENV_MLVRD	624-641	
PHEMA_INBFU	286-301	PENV_MMTVG	618-633				PENV_MLVRK	624-641	
PHEMA_INBGL	286-311	PENV_8FV1	864-880				PENV_M8VFB	170-187	
PHEMA_INBHK	283-308	PENV_8FV3L	861-877				PENV_RMCFV	603-620	
PHEMA_INBIB	286-303	PENV_8IVGB	93-109				PENV_8FV1	710-727	857-874
PHEMA_INBID	286-314	PENV_8IVMK	138-154	802-818			PENV_8FV3L	707-724	854-871
PHEMA_INBLE	302-317	PENV_8IVML	138-154	801-817			PENV_8IVM1	708-783	
PHEMA_INBMD	282-307	PENV_8IV84	806-822				PENV_8IVMK	785-782	
PHEMA_INBME	286-311	PENV_8IV8P	810-826				PENV_8IVML	784-781	
PHEMA_INBNA	286-303	PHEMA_CDVO	36-52				PENV_8IV84	788-786	
PHEMA_INBOR	301-316	PHEMA_CVBLY	381-400				PENV_8IV8P	773-790	
PHEMA_INBSI	301-316	PHEMA_CVBM	381-406				PENV_8MRVH	836-853	
PHEMA_INBSJ	286-313	PHEMA_CVBQ	381-406				PENV_8M9AV	42-59	
PHEMA_INBUB	284-309	PHEMA_CVHOC	381-406				PHEMA_CDVO	36-53	200-217
PHEMA_INBVI	286-311	PHEMA_CVMA5	402-417				PHEMA_CVBLY	381-406	
PHEMA_INBVK	303-318	PHEMA_CVMS	403-418				PHEMA_CVBM	381-406	
PHEMA_INBYB	286-301	PHEMA_IAAIC	237-263				PHEMA_CVBQ	381-406	

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PVQL2_CVPF9	442-467		PHEMA_IAME0	221-237				PHEMA_IAHT0	321-338	
PVQL2_CVPPU	440-466	604-619	PHEMA_IAMIN	85-101	231-247			PHEMA_IAHUR	321-338	
PVQL2_CVPR8	218-233		PHEMA_IANT0	237-253				PHEMA_IAJAP	317-334	
PVQL2_CVPRM	218-233		PHEMA_IAQU7	221-237				PHEMA_IAMAA	318-336	
PVQL2_IBV0	1058-1071		PHEMA_IARUD	234-250				PHEMA_IAMAB	324-341	
PVQL2_IBVB	1056-1070		PHEMA_IA8E2	234-250				PHEMA_IAMAO	322-338	
PVQL2_IBVD2	1058-1071		PHEMA_IA9H2	234-250				PHEMA_IAME1	322-338	
PVQL2_IBVK	1056-1070		PHEMA_IA8TA	230-246				PHEMA_IAME2	322-338	
PVQL2_IBVM	1056-1070		PHEMA_IATAI	235-251				PHEMA_IAME0	306-323	
PVQL8_H6V8A	701-716		PHEMA_IATKM	234-250				PHEMA_IAMIN	316-333	
PVQLB_PRVIF	203-218		PHEMA_IATK0	233-249				PHEMA_IANT0	322-338	
PVQLC_H5V8C	476-490		PHEMA_IATKR	230-246				PHEMA_IAPIL	320-337	
PVQLC_H5VE4	444-460		PHEMA_IATKW	228-246				PHEMA_IAQU7	306-323	
PVQLC_H5VE8	427-442		PHEMA_IAUDO	237-253				PHEMA_IARUD	320-337	
PVQLC_PRVIF	448-461		PHEMA_IAU89	236-251				PHEMA_IA8E2	320-337	
PVQLD_H6V11	78-94		PHEMA_IAVI7	238-254				PHEMA_IA8H2	321-338	
PVQLD_H5V2	78-94		PHEMA_IAXIA	235-251				PHEMA_IA8TA	316-332	
PVQLF_BR8VA	265-280		PHEMA_IAZC0	237-253				PHEMA_IATKM	320-337	
PVQLF_BR8VC	265-280		PHEMA_IAZH2	221-237				PHEMA_IAUDO	322-338	380-397
PVQLF_BR8VR	265-280		PHEMA_IAZH3	221-237				PHEMA_IAVI7	323-340	
PVQLF_HR8V1	265-280		PHEMA_IAZUK	237-253				PHEMA_IAZC0	322-338	
PVQLF_HR8VA	265-280		PHEMA_INBAA	116-131	285-310			PHEMA_IAZH2	306-323	
PVQLF_HR8VL	265-280		PHEMA_INBBE	123-139	303-318			PHEMA_IAZH3	306-323	
PVQLF_HR8VR	265-280		PHEMA_INBBO	116-132	283-308			PHEMA_IAZUK	322-338	
PVQLF_MUMP3	8-24		PHEMA_INBEN	123-139	301-318			PHEMA_MUMPM	101-118	
PVQLI_VZVD	278-293		PHEMA_INBFU	108-124	288-301			PHEMA_MUMPR	101-118	
PVQLM_HANTB	900-915		PHEMA_INBGL	116-136	288-311			PHEMA_MUMP9	101-118	
PVQLM_PTPV	743-758		PHEMA_INBHK	116-132	283-308			PHEMA_NDVA	93-110	
PVQLM_8EQUR	901-916		PHEMA_INBIB	108-124	288-303			PHEMA_NDVB	93-110	
PVQLM_8EQU8	900-915		PHEMA_INBID	120-136	288-314			PHEMA_NDVD	93-110	
PVQLY_LA88Q	426-441		PHEMA_INBLE	113-129	302-317			PHEMA_NDVH	93-110	
PVQLY_LA88J	427-442		PHEMA_INBMD	113-129	282-307			PHEMA_NDVI	93-110	
PVQLY_MOPEI	426-440		PHEMA_INBME	116-132	288-311			PHEMA_NDVM	93-110	
PVM3_REQVO	621-638		PHEMA_INBNA	108-124	288-303			PHEMA_NDVQ	93-110	
PVM9A_HPB08	380-395		PHEMA_INBOR	123-139	301-318			PHEMA_NDVTQ	93-110	
PVM8A_HPBV9	187-202		PHEMA_INB81	123-139	301-316			PHEMA_NDVU	93-110	
PVM9A_WHV1	378-393		PHEMA_INB9J	116-136	288-313			PHEMA_PHODV	30-53	
PVM8A_WHV69	383-398		PHEMA_INBUB	116-132	284-309			PHEMA_PI1HW	486-503	
PVM9A_WHV7	383-398		PHEMA_INBV1	116-132	288-311			PHEMA_PI3B	111-128	
PVM6A_WHV8	383-398		PHEMA_INBVK	123-139	303-318			PHEMA_PI3H4	111-128	
PVM9A_WHV81	383-398		PHEMA_INBYB	108-124	288-301			PHEMA_PI3HA	111-128	
PVM8A_WHVW6	234-249		PHEMA_MUMPM	133-148				PHEMA_PI3HT	111-128	
PVMT2_IA4NN	26-40		PHEMA_MUMPR	133-148				PHEMA_PI3HU	111-128	
PVMT2_IABAN	26-40		PHEMA_MUMP8	133-148				PHEMA_PI3HV	111-128	
PVMT2_IAFQW	26-40		PHEMA_PI1HW	345-360				PHEMA_PI3HW	111-128	
PVMT2_IAFPR	26-40		PHEMA_PI2H	65-81				PHEMA_PI3HX	111-128	
PVMT2_IAFPW	26-40		PHEMA_PI2HT	65-81				PHEMA_PI4HA	80-97	

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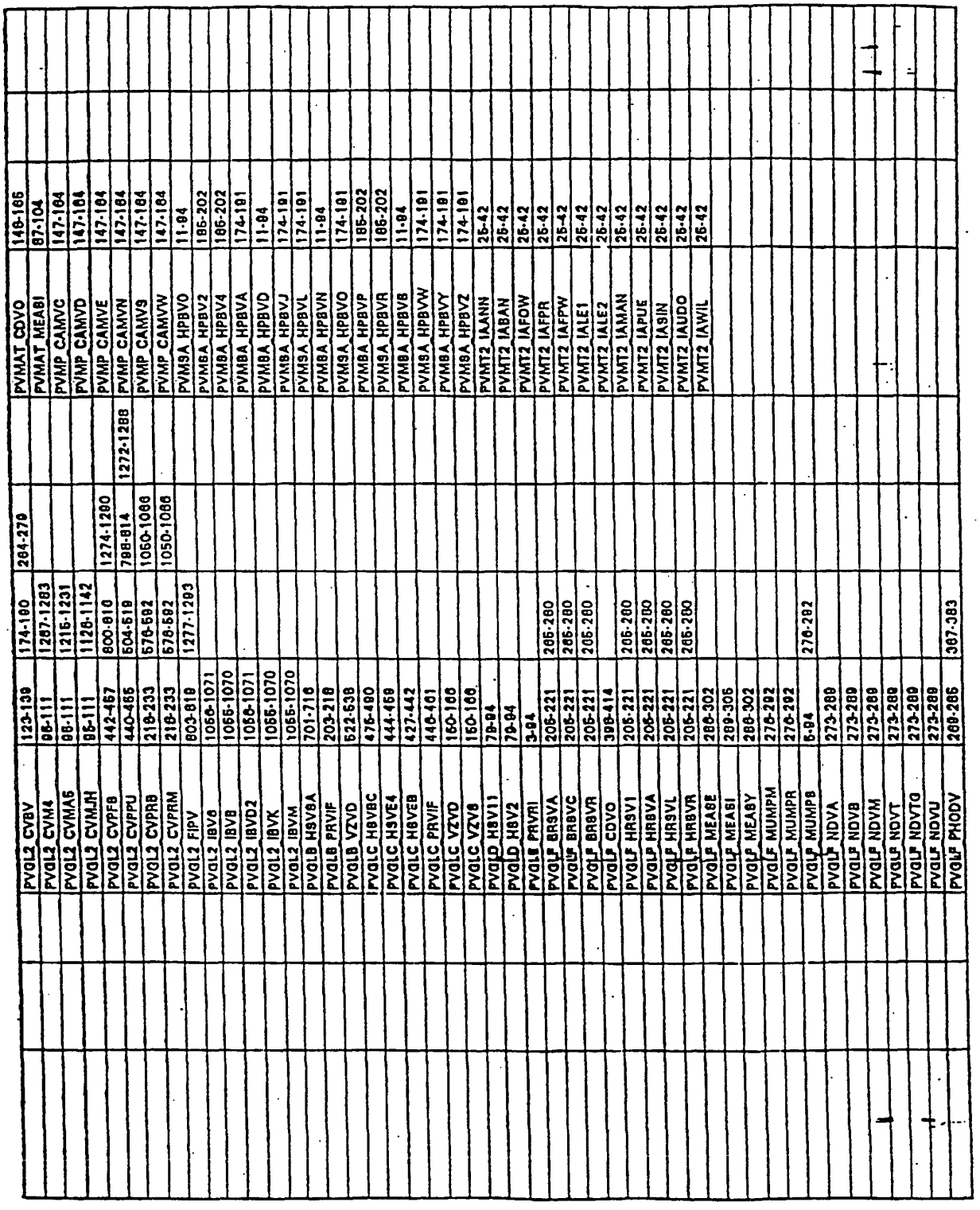

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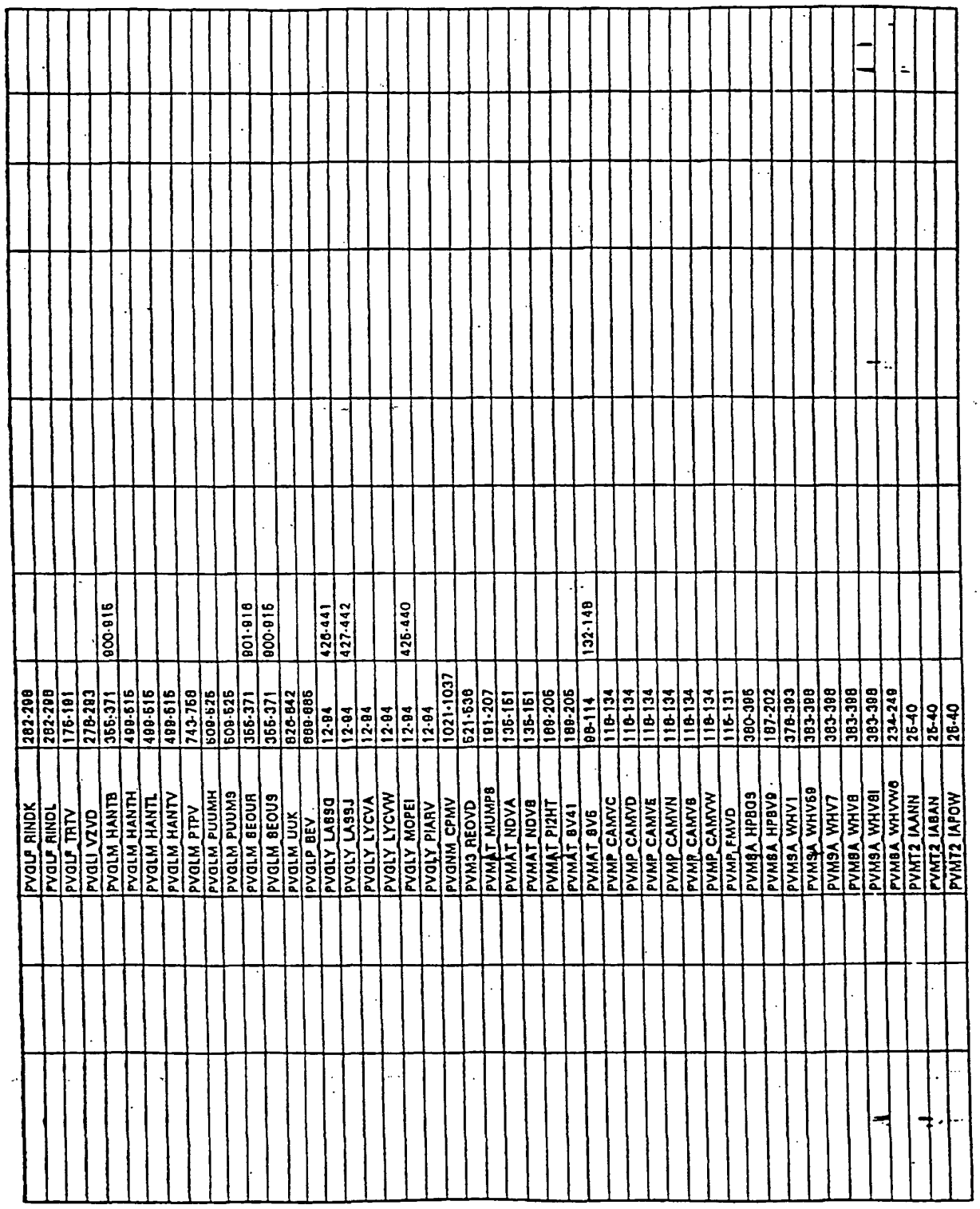

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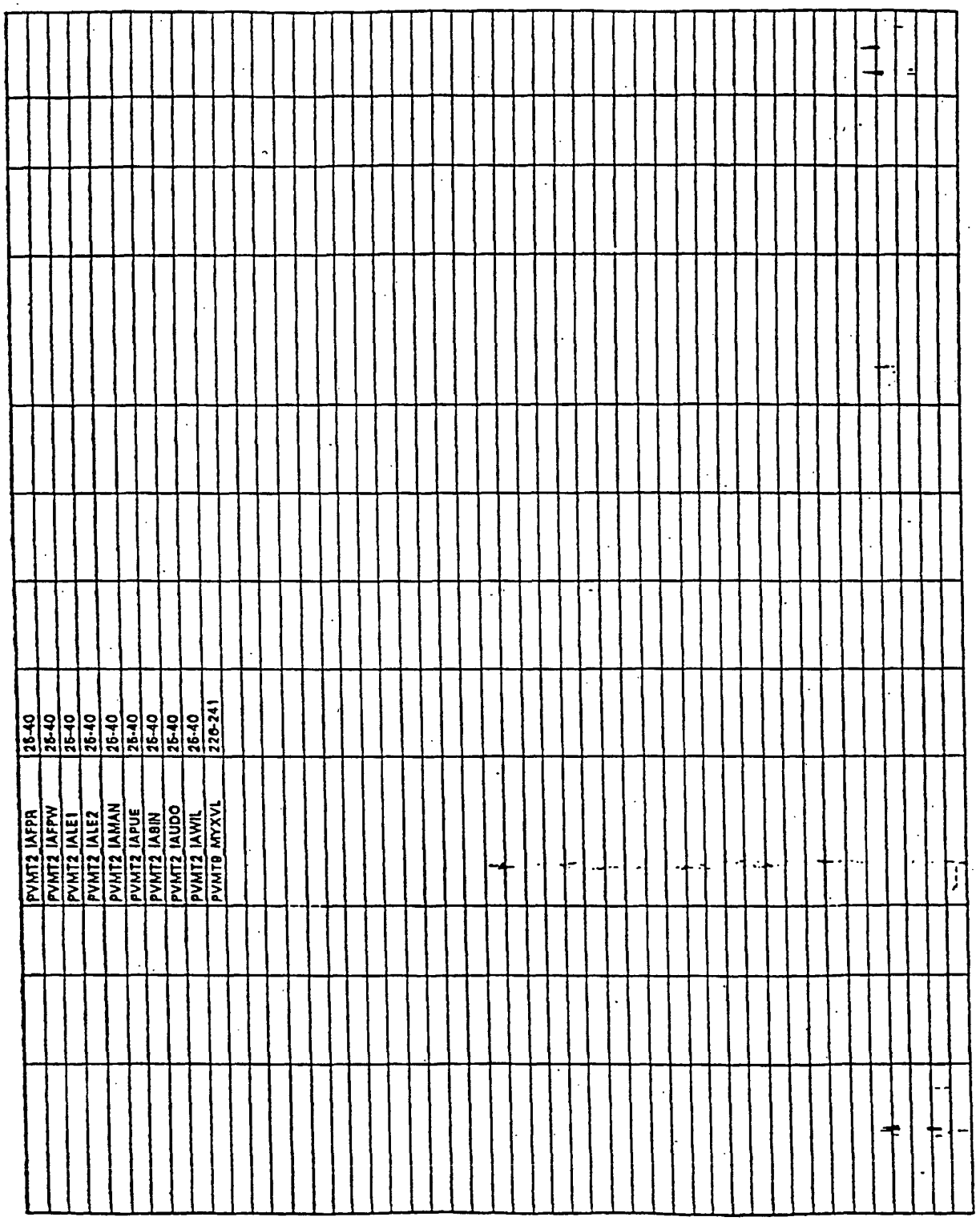
PVMT2_IAFPR 25-40
PVMT2_IAFPW 25-40
PVMT2_IALE1 25-40
PVMT2_IALE2 25-40
PVMT2_IAMAN 25-40
PVMT2_IAPUE 25-40
PVMT2_IABIN 25-40
PVMT2_IAUDO 25-40
PVMT2_IAWIL 25-40
PVMT0_MYXVL 226-241

TABLE XI

SEARCH RESULTS SUMMARY FOR P3CTLZIP, P4CTLZIP, P5CTLZIP, AND P6CTLZIP MOTIFS

FOR ILLUSTRATIVE PURPOSES ONLY

P3CTL2IP			P4CTL2IP			P5CTL2IP			P6CTL2IP		
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			LIBRARY FILE		
PENV BIV27	147-166		PENV1 FR3FV	380-399		PENV1 FR9FV	380-400		PENV BIV08	47-68	626-646
PENV CAEVC	810-828		PENV AVI6U	98-117		PENV2 FR5FV	380-400		PENV BIV27	47-68	147-166 / 564-575
PENV CAEVO	808-826		PENV BIV27	147-166		PENV BAEVM	170-190		PENV FENV1	226-246	630-651
PENV HV2B6	760-778		PENV HV12H	123-142		PENV FIVPE	781-801		PENV FLVC8	624-645	
PENV HV2D1	741-759		PENV HV2D2	0-20		PENV FIV3D	770-789		PENV FLVOL	447-466	606-626
PENV HV2G1	741-759		PENV HV2S8	770-787		PENV FIVT2	780-800		PENV FLVL8	467-486	625-645
PENV HV2N2	742-760		PENV J9RV	641-660		PENV FLVQL	0-20		PENV FLV9A	444-465	602-623
PENV HV2RO	751-769		PENV RSVP	633-652		PENV FOAMV	266-276	824-844	PENV FOAMV	163-174	867-878
PENV HV29B	743-761		PHEMA VACCC	173-192		PENV FSVOA	0-20		PENV FSVOA	467-488	825-845
PENV HV2BT	746-763		PHEMA VACCI	173-192		PENV HV1C4	420-440		PENV F6VC8	447-468	606-628
PENV J9RV	376-394		PHEMA VACCT	173-192		PENV HV2CA	760-779		PENV F8V9M	460-471	608-628
PHEMA PI2H	118-138		PHEMA VACCV	173-192		PENV MLVF6	400-420		PENV F6V6T	467-488	
PHEMA PI2HT	118-138		PVENV BEV	62-81		PEIV MMTV8	843-863	843-863	PENV GALV	52-73	618-640
PHEMA 6V41	56-73		PVENV MCV1	61-80		PENV MMTVO	843-863		PENV HV28E	760-771	
PVENV THOOV	473-491		PVEIV MCV2	61-80		PENV OMVV9	76-95		PEIV HV2O1	741-762	
PVG16 BPP22	83-101		PVFU9 ORFN2	28-48		PENV RSVP	42-62		PENV HV2N2	742-763	
PVG24 BPT4	116-133		PVG01 H9VEB	100-118		PEIV 8FV1	824-844		PENV HV2RO	761-772	
PVG38 H6V8A	344-362		PVG01 VACCC	376-395		PENV 8FV3L	821-841		PENV HV26T	746-766	
PVG4O H9V11	14-32		PVG01 VACCV	316-334		PENV 9IVM1	780-780		PENV MCFF	800-821	
PVG5O H6V8A	6-24		PVG01 VARV	376-395		PENV 6IVMK	786-786		PENV MCFF3	801-822	
PVG6I BPT4	83-81		PVG06 BPT4	827-846		PENV 8IVML	784-784		PENV MLVAV	830-851	
PVG6I H6V11	84-102		PVG10 H6V11	36-54		PENV 6IV84	789-789		PENV MLVC8	826-846	
PVG6I H9V11	166-173		PVG11 H9V11	103-122	160-180	PENV 9IV8P	773-793		PENV MLVF6	839-860	
PVGF1 I8V8	2788-2808	3374-3382	PVG1 BPPH2	31-50		PHEMA CDVO	403-613		PENV MLVFF	839-860	
PVGL2 CVH22	1063-1071		PVG1 BPV1R	869-878		PHEMA CVBLY	381-411		PENV MLVFP	839-860	
PVGL2 I8V8	1056-1074		PVG20 BPT4	231-250		PHEMA CVBM	381-411		PENV MLVHO	826-847	
PVGL2 I8V8	1066-1073		PVG32 VZVD	80-100		PHEMA CVBQ	381-411		PENV MLVKI	187-188	
PVGL2 I8VD2	1056-1074		PVG36 BPK3	132-151		PHEMA CVHOC	381-411		PENV MLVMO	828-850	
PVGL2 I8VK	1066-1073		PVG37 BPT2	19-38	820-848	PHEMA CVMA6	402-422		PENV MLVRD	824-845	
PVGL2 I8VM	1066-1073		PVG37 BPT4	19-38	826-844	PHEMA IACKG	81-101		PENV MLVTK	824-845	
PVGL8 H9V81	680-678	888-707	PVG39 H9V11	1038-1067		PHEMA IADMA	81-101		PENV M9VFB	170-191	
PVGL8 H6V8C	682-710		PVG41 H9V11	62-81		PHEMA MUMPM	387-417		PENV RMCFV	803-824	
PVGL8 H9V8A	684-682		PVG43 BPPF3	380-399		PHEMA MUMPR	387-417		PENV 9FV1	867-878	
PVGL8 ILTV6	740-758		PVG46 BPPF1	337-356		PHEMA MUMP9	387-417		PENV 8FV3L	167-170	854-876
PVGL8 ILTV8	760-788		PVG69 H9V11	142-161		PHEMA PHODV	403-613		PENV 8IVA1	437-458	
PVGL8 ILTVT	760-788		PVG81 H6V11	117-136		PHEMA PI1HW	322-342		PENV 8IVAQ	442-463	
PVGLC VZVD	431-449		PVG87 H9V11	318-337	1072-1081	PHEMA PI2H	13-33		PENV 8IVAI	421-442	
PVGLC VZV8	431-449		PVGF1 I8V8	1687-1806	2108-2127	PHEMA PI2HT	13-33		PENV 8IVAT	436-456	
PVGLF PI3H4	2-24		PVGL2 CVBF	881-1010		PHEMA RINDL	407-617		PENV 8M9AV	42-63	
PVGLH H6V8G	314-332		PVGL2 CVBL9	881-1010		PHEMA 6END6	322-342		PHEMA CVMA6	402-423	
PVGLH H8VE4	814-832		PVGL2 CVBLY	881-1010		PHEMA 6END8	322-342		PHEMA IADE1	200-287	
PVGLH H8VE8	807-825		PVGL2 CVBM	881-1010		PHEMA 6END8	322-342		PHEMA MUMPM	226-246	
PVGLI H9V11	6-24		PVGL2 CVBQ	881-1010		PHEMA 6END9	322-342		PHEMA MUMPR	226-246	
PVGNM BMAV	678-698		PVGL2 CVBV	881-1010		PHEMA 6END2	322-342		PHEMA MUMP8	226-246	
PVM01 VACCC	134-162	177-196	PVGL2 CVH22	788-787	1116-1134	PVENV LELV	27-47	146-168	PHEMA PHODV	213-234	

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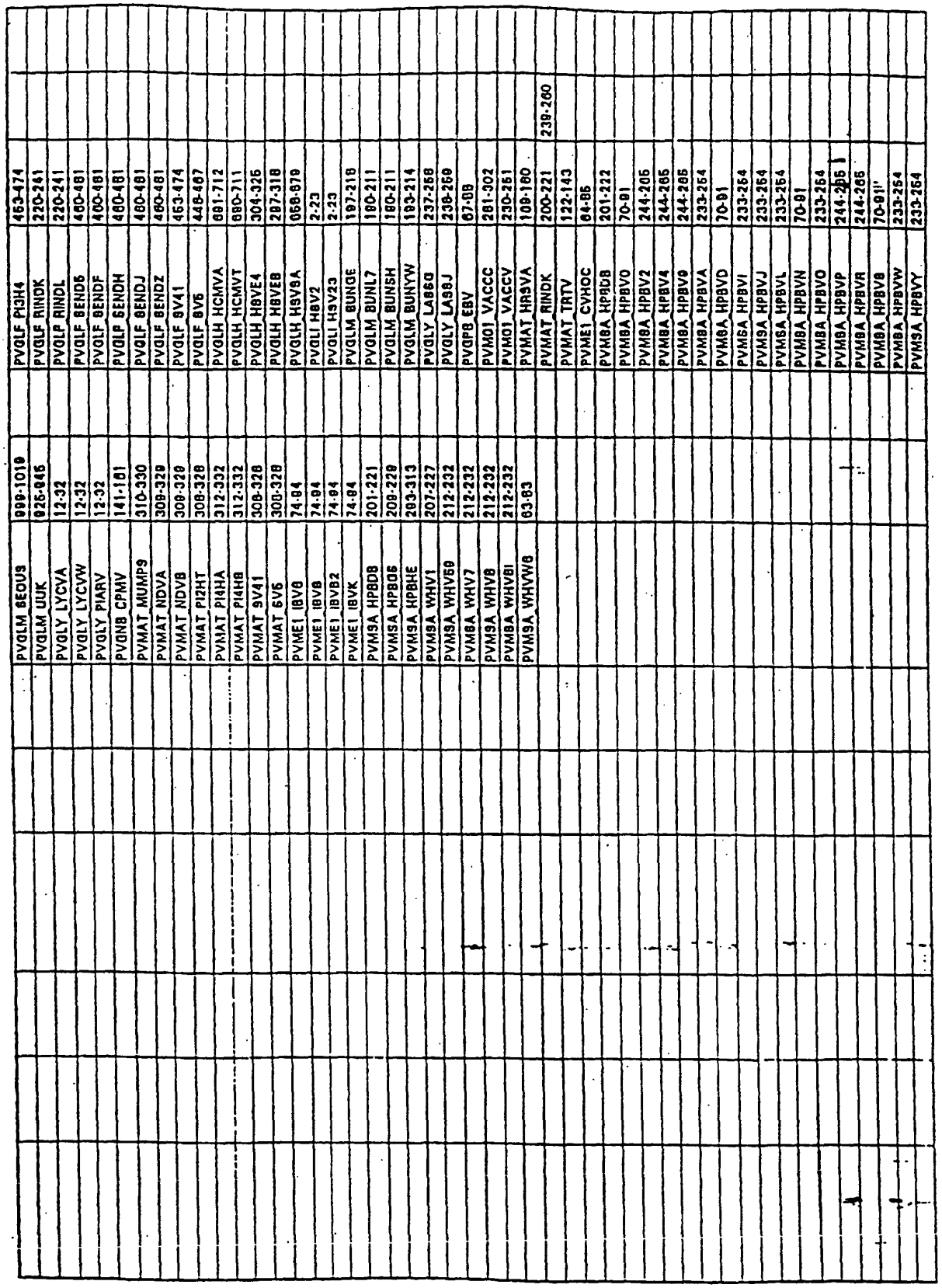

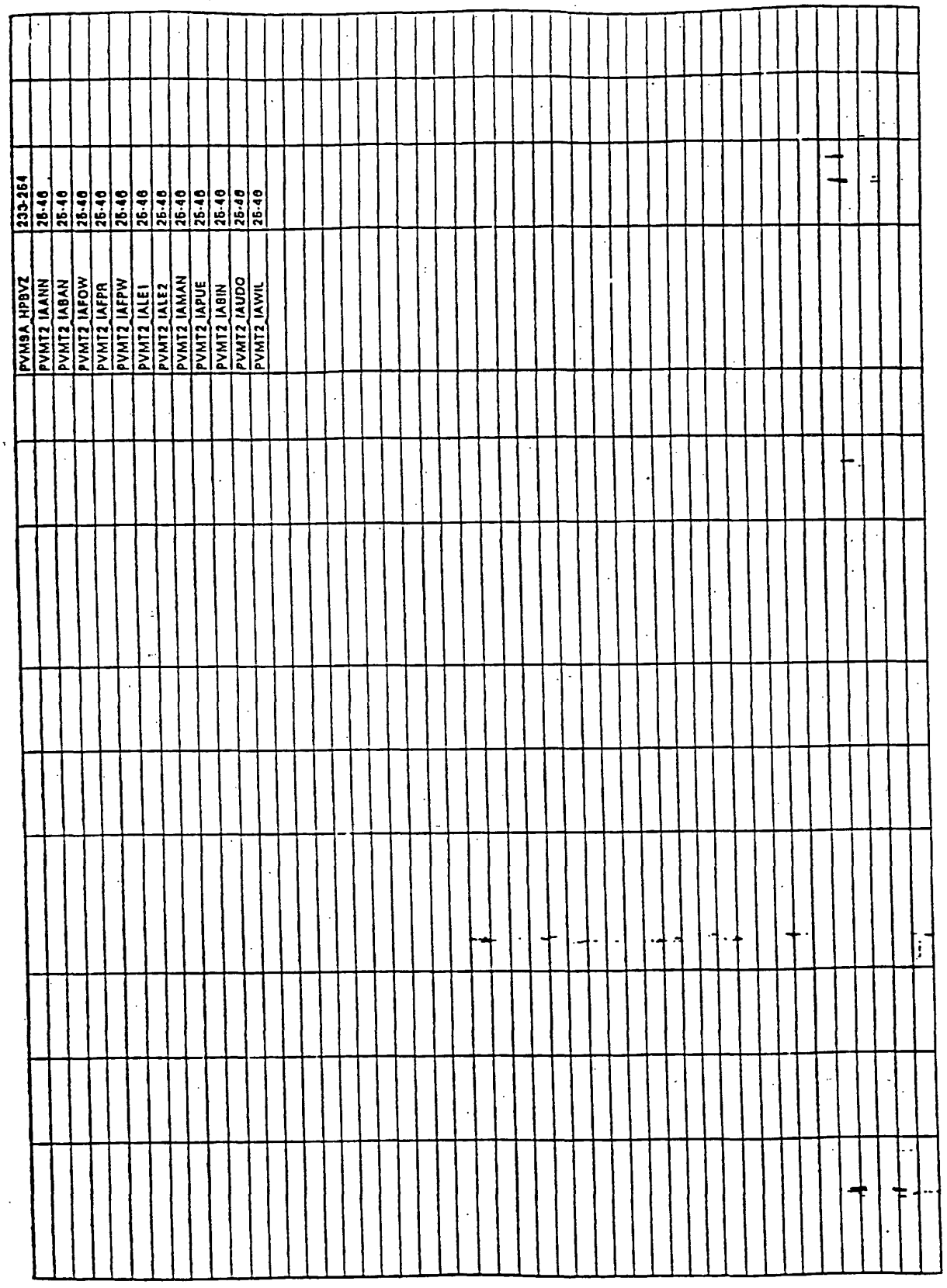
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PVMT2_IABAN 25-40
PVMT2_IAFOW 25-40
PVMT2_IAFPR 25-40
PVMT2_IAFPW 25-40
PVMT2_IALE1 25-40
PVMT2_IALE2 25-40
PVMT2_IAMAN 25-40
PVMT2_IAPUE 25-40
PVMT2_IABIN 25-40
PVMT2_IAUDO 25-40
PVMT2_IAWIL 25-40

TABLE XII

SEARCH RESULTS SUMMARY FOR P7CTLZIP, P8CTLZIP, AND P9CTLZIP MOTIFS

FOR ILLUSTRATIVE PURPOSES ONLY

P7CTL2IP		P8CTL2IP				P8CTL2IP	
LIBRARY FILE		LIBRARY FILE				LIBRARY FILE	
PENV_BAEVM	202-224	PENV1_FR3FV	380-403			PENV_BLVAF	303-327
PENV_HV1B1	498-520	PENV2_FR6FV	380-403			PENV_BLVAU	303-327
PENV_HV1B8	493-516	PENV_BIVO8	178-201			PENV_BLVAV	303-327
PENV_HV1BN	494-516	PENV_BIV27	207-230			PENV_BLVB2	303-327
PENV_HV1BR	503-526	PENV_FOAMV	804-887			PENV_BLVBG	303-327
PENV_HV1EL	496-517	PENV_HV123	176-188			PENV_BLVJ	303-327
PENV_HV1H2	498-520	PENV_HV2BE	3-26	781-804		PENV_FIVPE	781-806
PENV_HV1H3	498-520	PENV_HV2CA	760-773			PENV_FIV3D	779-803
PENV_HV1J3	610-632	PENV_HV2D1	3-26	772-796		PENV_FIVT2	780-804
PENV_HV1JA	490-512	PENV_HV2Q1	772-785			PHEMA_CVBLY	391-415
PENV_HV1K8	504-526	PENV_HV2N2	777-800			PHEMA_CVBM	391-415
PENV_HV1MA	600-622	PENV_J3RV	641-664			PHEMA_CVBQ	391-415
PENV_HV1MF	498-518	PENV_8FV1	804-827			PHEMA_CVHOC	391-415
PENV_HV1ND	488-510	PENV_8FV3L	801-824			PHEMA_INCCA	442-466
PENV_HV1PV	498-520	PENV_8IVM1	803-826			PHEMA_INCEN	430-454
PENV_HV1R1	489-511	PENV_8IVMK	802-825			PHEMA_INCGL	430-454
PENV_HV122	123-146	496-517	PENV_8IVML	801-824		PHEMA_INCHY	420-463
PENV_HV126	497-518		PENV_8IV84	800-829		PHEMA_INCJH	443-467
PENV_HV128	506-527		PENV_8IV9P	810-833		PHEMA_INCKY	420-463
PENV_HV12H	498-520		PHEMA_CDVO	200-223		PHEMA_INCMI	420-463
PENV_J3RV	370-388		PHEMA_PI2H	65-88		PHEMA_INCNA	420-463
PENV_MPMV	213-235		PHEMA_PI2HT	65-88		PHEMA_INCP1	430-454
PENV_8RV1	213-235		PVF11_VACCC	101-184		PHEMA_INCP2	430-454
PHEMA_IAAIC	37-59		PVF16_VACCC	26-48		PHEMA_INCP3	430-454
PHEMA_IABAN	21-43		PVP16_VACCP	3-26		PHEMA_INCTA	430-454
PHEMA_IADA3	37-59		PVQ1L_AMEPV	313-336		PHEMA_INCYA	430-454
PHEMA_IADH2	21-43		RVQ2B_H3VII	401-614		PHEMA_MUMPM	101-125
PHEMA_IADH3	21-43		PVQ43_H8VII	322-345		PHEMA_MUMPR	101-126
PHEMA_IADH4	21-43		PVQ62_H3VII	220-262		PHEMA_MUMP3	101-126
PHEMA_IADH6	21-43		PVQ07_H8VII	722-745		PHEMA_PI1HW	28-53
PHEMA_IADH6	21-43		PVQL2_CVBF	10-33		PVENV_BEV	82-88
PHEMA_IADH7	21-43		RVQL2_CVBL9	651-674		PVF05_VACCC	280-304
PHEMA_IADM2	37-59		PVQL2_CVBLY	10-33		PVF06_VACCP	280-304
PHEMA_IADMA	28-50		PVQL2_CVM4	1207-1280		PVF05_VACCV	281-305
PHEMA_IADU3	37-59		PVQL2_CVMA6	1216-1238		PVF09_VACCC	176-200
PHEMA_IAEN6	21-43		PVQL2_CVMJH	1126-1149		PVF09_VACCV	176-200
PHEMA_IAEN7	37-59		PVQL2_CVPF8	1274-1207		PVQ01_V2VD	58-82
PHEMA_IAMAO	37-59		PVQL2_CVPPU	1272-1285		PVQ10_H8V8A	356-379
PHEMA_IAME1	37-59		PVQL2_CVPR8	1050-1073		PVQ12_H8V9A	80-92
PHEMA_IAME2	37-59		PVQL2_CVPRM	1050-1073		PVQ19_H8VII	80-112
PHEMA_IAME6	21-43		PVQL2_FIPV	1277-1300		PVQ28_H3VII	173-197
PHEMA_IANT6	37-59		PVQL2_IBV6	196-218		PVQ43_H6VII	108-133
PHEMA_IAQU7	21-43		PVQL2_IBV8	196-218		PVQ67_H8VII	108-132
PHEMA_MTKM	33-55		PVQL2_IBVO2	196-219		PVQ72_H8VII	220-244
PHEMA_IAUDO	37-59		PVQL2_IBVD3	196-219		PVQF1_IBV8	3001-3025

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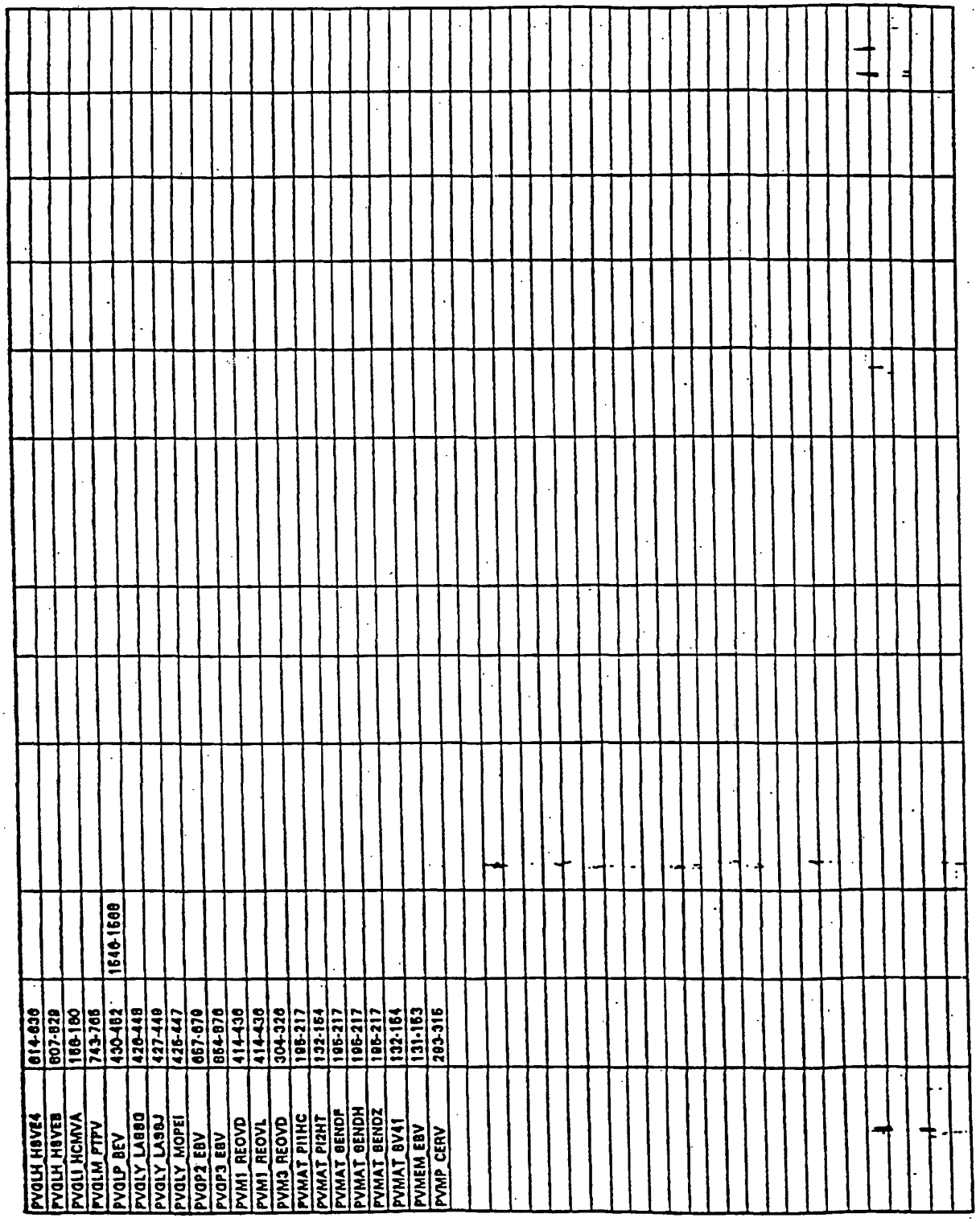

PVGLH H8VE4 614-630
PVGLH H8VEB 807-829
PVGLI HCMVA 186-180
PVGLM PTPV 743-765
PVGLP BEV 430-462 1640-1680
PVGLY LA880 420-448
PVGLY LA8BJ 427-440
PVGLY MOPEI 426-447
PVOP2 EBV 667-670
PVOP3 EBV 864-876
PVM1 REOVD 414-430
PVM1 REOVL 414-430
PVM3 REOVD 304-320
PVMAT P11HC 195-217
PVMAT P12HT 132-164
PVMAT 8ENDP 195-217
PVMAT 8ENDH 195-217
PVMAT 8ENDZ 132-164
PVMAT 8V41 131-163
PVMEM EBV 203-315
PVMP CERV

TABLE XIII

SEARCH RESULTS SUMMARY FOR P12LZIPC MOTIF

FOR ILLUSTRATIVE PURPOSES ONLY

PCGENE	PSECTZIP	All Viruses (No Bacteriophage)								
FILENAME	PRODUN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
P194K_TRVSV	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	360-378	463-478	600-619	641-661	1011-1030	1290-1325	1385-1409	
P1BETA_VACCC	1BETA 11SD	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-56	297-321						
P1BETA_VACCV	1BETA 11SD	VACCINIA VIRUS (STRAIN WR)	41-56	297-321						
P1BETA_VARV	1BETA 11SD	VARIOLA VIRUS	41-56							
P42KD_FOWPV	42 KD PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438NEUPH)	41-69							
P42KD_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	187-410							
P42KD_VARV	11 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	388-411							
P43KD_HSV11	UL46	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	279-303							
P43KD_HSV1F	UL46	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	279-303							
P47KD_HSVED	ALPHA TRANS-INDUCING FACTOR 47 KD PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	197-222							
P48K_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	215-241							
P48KD_VZVD	ALPHA TRANS-INDUCING FACTOR 74 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-79	177-197						
P48KD_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	47-71							
P48TN_HSVBP	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8 2)	101-120	177-197						
P48TN_HSVE4	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	104-123							
P48TN_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	139-148							
P48TN_VZVD	ALPHA TRANS-INDUCING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201-220							
P4AT_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	386-412	1101-1125						
P52_BBV	P52 PROTEIN	BLACK BEETLE VIRUS	31-52							
P67KD_HSV60	TRANSCRIPTIONAL REGULATORY PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 60)	53-78							
P68KD_EBV	BCRF1 PROTEIN PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	96-123							
P8RTA_EBV	TRANSCRIPTION ACTIVATOR RTA 1)	EPSTEIN-BARR VIRUS (STRAIN B95-8)	16-31	200-224						
PCAJD_VACCC	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	188-203							
PCAJD_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	188-203							
PCAJD_VARV	CELL SURFACE-BINDING PROTEIN	VARIOLA VIRUS	188-203							
PCCTH_HSVSA	CONTL CONTROL PROTEIN HOMOLOG PREC	HERPESVIRUS SAIMIRI (STRAIN 11)	326-348							
PCELF_HSV11	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	178-196	212-238	286-309					
PCELF_HSV1K	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	178-196	212-238						
PCELF_HSV2H	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	178-196	212-238	285-309					
PCELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	205-223	240-268						
PCELF_VZVD	CELL FUSION PROTEIN PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	146-169							
PCGHD_HSVSA	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	35-61	116-142						
PCOAT_BFDV	COAT PROTEIN VP1	BUDGERIGAR FLEDGLING DISEASE VIRUS	93-110							
PCOAT_POVBA	COAT PROTEIN VP1	POLYOMAVIRUS BK (STRAIN AS)	25-52	97-123	231-251					
PCOAT_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK	25-52	97-123	231-251					
PCOAT_POVBO	COAT PROTEIN VP1	BOVINE POLYOMAVIRUS	96-120							
PCOAT_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	16-43							
PCOAT_POVJC	COAT PROTEIN VP1	POLYOMAVIRUS JC	17-44	89-115	225-241					
PCOAT_POVLY	COAT PROTEIN VP1	LYMPHOTROPIC POLYOMAVIRUS	97-123							
PCOAT_POVMK	COAT PROTEIN VP1	MOUSE POLYOMAVIRUS (STRAIN KILHAM)	142-160	211-249						
PCOAT_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	27-44	99-125	235-253					
PCOAT_TTV1	COAT PROTEIN VP1	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	80-109							
PCOAT_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	77-104							
PCOAT_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	79-102							
PCOAT_POVMO	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN 3)	203-226							
PCOAT_TTV1	COAT PROTEIN TP1	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	33-55							
PCOAT_ABMTW	COAT PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	140-171							
PCOAT_BOOLV	COAT PROTEIN PRECURSOR	BOOLARRA VIRUS	383-401							
PCOAT_CIVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	364-387	392-409						
PCOAT_CLVK	COAT PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	165-188							
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	165-188							
PCOAT_CMVSI	COAT PROTEIN	CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	58-76							
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	19-42							
PCOAT_CSMV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	219-238							
PCOAT_CTV36	COAT PROTEIN	CITRUS TRISTEZA VIRUS (ISOLATE T36)	72-94							
PCOAT_FCVC4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI68 FIV)	564-587	643-664						
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	564-587	643-657						

PCGENE	PIRCTAZIP	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PCOAT_FCV19	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	567-590	645-660						
PCOAT_FPV	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS	690-703							
PCOAT_FPV19	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS (STRAIN 19)	690-703							
PCOAT_HEVS	COAT PROTEIN	HELENIUM VIRUS S	47-66							
PCOAT_MEVA	COAT PROTEIN VP1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	685-700							
PCOAT_NDSV	COAT PROTEIN	NEI ON NECROTIC SPOT VIRUS	17-33							
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	176-197	704-717						
PCOAT_NMV	COAT PROTEIN	NARCISSUS MOSAIC VIRUS	67-86							
PCOAT_NODAV	COAT PROTEIN PRECURSOR	NODAMURA VIRUS	319-334							
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	104-120							
PCOAT_ONMV	COAT PROTEIN	ONONIS YELLOW MOSAIC VIRUS	35-52							
PCOAT_PAVC1	COAT PROTEIN VP1	CANINE PARVOVIRUS (TYPE 2 / STRAIN A72)	547-562							
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN 780929)	685-700							
PCOAT_PAVCO	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN CPV-D CORNELL 120)	700-715							
PCOAT_PAVCN	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN F)	711-726							
PCOAT_PEMV	COAT PROTEIN PRECURSOR	PEPPER MOTTLE VIRUS	273-295							
PCOAT_PMV	COAT PROTEIN	PAPAYA MOSAIC POTEXVIRUS	85-101							
PCOAT_PMV5	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN S)	64-84	103-119						
PCOAT_PVS5	COAT PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	138-153							
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	138-153							
PCOAT_SMWLN	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	51-67							
PCOAT_SMYEA	COAT PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	37-72							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	223-237							
PCOAT_TBSVD	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN DS-3)	339-381							
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	73-89							
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	134-177							
PCOAT_THGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	102-128							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	102-128							
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN 06)	102-128							
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAHLEMENSE)	102-128							
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	102-128							
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN HOLMES RIBGRASS (HR))	102-128							
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O)	102-128							
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	102-128							
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO)	102-128							
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	119-142							
PCOAT_TNVD	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D)	108-134							
PCOLL_HSVSC	COLLAGEN-LIKE PROTEIN	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	71-96							
PCORA_HPBV1	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADW2)	79-100							
PCORA_HPBVA	CORE ANTIGEN	HEPATITIS B VIRUS (STRAIN ALPHA1)	15-31							
PCORA_HPBV2	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADYW)	79-100							
PDNBI_ADE01	PROBABLE DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	71-91							
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	649-671							
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	681-708							
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	459-476	597-610						
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	459-476	597-610						
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	459-476	597-610						
PDNBI_HSVB1	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BA1V)	455-472	596-616						
PDNBI_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAY)	810-831							
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	101-127	610-639	869-887	974-1000				
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	657-684							
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLHURN)	188-211	641-670						
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	269-294							
PDPOL_ADE03	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 3	204-231	828-850						
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	204-231	828-850						
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	331-350	494-517	894-916					
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	262-281	562-583	826-848					

PCGENE	P1CTLZIP	All Viruses (No Bacteriophage*)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PDPOL_CBEPV	DNA POLYMERASE	CHORDOPOXVIRUS	410-434	634-658	332-357						
PDPOL_CIVNJ	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	424-442								
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	153-172	424-442							
PDPOL_EBV	DNA POLYMERASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	334-374	418-461	324-362	667-687	973-998				
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	60-77	220-247							
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	569-587	964-980	1036-1053						
PDPOL_IPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE SH)	4-29	153-174	322-341	334-357					
PDPOL_IPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	4-29	153-174	322-340	333-351					
PDPOL_IPBDU	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	180-200	211-231							
PDPOL_IPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE SH)	4-29	153-174	322-341	334-357					
PDPOL_IPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	448-475								
PDPOL_IPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	4-29	334-351							
PDPOL_IPBV1	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYWI)	412-429	441-461	864-880						
PDPOL_IPBV4	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	400-417								
PDPOL_IPBVA	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW / STRAIN AYW)	412-429	447-463	864-880						
PDPOL_IPBVA	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN ALPHA1)	80-96	399-426	810-837	330-768					
PDPOL_IPBVI	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/IDW420)	80-96	410-437	445-468	761-778					
PDPOL_IPBVJ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/IDW211)	80-96	410-437	445-468	761-778					
PDPOL_IPBVL	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE)	80-96	399-426	434-457	330-767					
PDPOL_IPBVM	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AUR / MUTANT)	80-96	410-437	760-777						
PDPOL_IPBVO	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/IDW312)	80-96	410-437	445-468	761-778					
PDPOL_IPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PDW294)	412-429	447-463							
PDPOL_IPBVR	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR)	80-96	410-437	761-778						
PDPOL_IPBVW	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW)	82-98	401-433	440-456						
PDPOL_IPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	80-96	399-426	434-457	330-767					
PDPOL_IPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	80-96	399-426	434-457						
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	797-817	877-897	1031-1050						
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	797-817	877-897	1031-1050						
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	797-817	877-897	1031-1050						
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	797-817	877-897	1031-1050						
PDPOL_HSV2I	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	802-822	882-902	1036-1055						
PDPOL_HSV8U	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 8 / STRAIN UGANDA-1103)	633-652	786-803	838-883						
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS 1 TYPE 1 (STRAIN AB4P)	289-309	337-393	434-477	598-618	878-898				
PDPOL_HSVTI	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	332-275	397-418							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	108-127	397-419	344-364	514-532	955-972				
PDPOL_MCMV5	DNA POLYMERASE	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	103-122	335-353	780-802						
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	318-336	676-697							
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	421-437								
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-331	363-382	440-463	733-750	937-781	1008-1024			
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	446-471								
PDPOL_WHV39	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 39	451-478								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	451-478								
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	450-477	534-551							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	451-478								
PDPOL_WHVW6	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW533)	123-150								
PDPOM_HPBYY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	399-426	434-450	150-767						
PDUT_HCMVA	DUTPASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-126								
PDUT_HSVE4	DUTPASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	130-154								
PDUT_HSVEB	DUTPASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	130-149								
PDUT_HSVTI	DUTPASE	ICTALURID HERPESVIRUS 1	72-93								
PDUT_HSVSA	DUTPASE	HERPESVIRUS SAIMIRI (STRAIN 11)	23-43	79-104	168-181						
PE1I1_ADEM1	EARLY E1A 11 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	24-47								
PE1A6_ADE07	EARLY E1A 67 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	8-35								
PE1A_ADE04	EARLY E1A 38 KD PROTEIN	HUMAN ADENOVIRUS TYPE 4	104-170								
PE1A_ADE07	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	8-35								
PE1A_ADES7	EARLY E1A 28 KD PROTEIN	SIMIAN ADENOVIRUS TYPE 7	173-189	238-254							
PE1BL_ADE12	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	431-467								

All Viruses (No Bacteriophage)

PCGENE	PSTCLIP									
FILENAME	FILQUERY	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PE18L_ADEC1	E1B PROTEIN, LARGE T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	101-122							
PE18L_ADEM1	EARLY E1B 44 KD PROTEIN	TUPAIA ADENOVIRUS	75-101							
PE18S_ADEC1	E1B PROTEIN, SMALL T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	55-77							
PE18S_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	118-138							
PE1I0_ADE03	EARLY E1B 10.4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	3-21	34-60						
PE1I0_ADE05	EARLY E1B 10.4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	3-21	33-60						
PE1I0_ADE07	EARLY E1B 10.4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	3-24							
PE1I1_ADE03	EARLY E1A 11.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	27-53							
PE1I1_ADE05	EARLY E1B 9.0 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	19-45							
PE1I1_ADE07	EARLY E1A 10.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 7	20-46							
PE1I1_ADE07	EARLY E1 17 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	36-62							
PE1I4_ADE03	EARLY E1 14.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	108-135							
PE1I5_ADE01	EARLY E1B 14.1 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 1	52-72							
PE1I5_ADE07	EARLY E1B 14.9 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	51-71							
PE1I6_ADE03	EARLY E1 16 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	102-125							
PE1I7_ADE03	EARLY E1 20.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	146-167							
PE1I7_ADE07	EARLY E1 20.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 7	146-167							
PE1I8_ADEC1	EARLY E1 22.3 KD GLYCOPROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	135-177							
PE1GL_ADEM1	EARLY E1 17.7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	105-127							
PE4I1_ADE03	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	56-77							
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	56-77							
PE4I1_ADEM1	PROBABLE EARLY E4 11 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	61-80							
PE4I3_ADE03	EARLY E4 34 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	80-106							
PEAD_EBV	EARLY ANTIGEN PROTEIN D	EPSTEIN-BARR VIRUS (STRAIN B95-8)	261-286							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-184							
PEBN3_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	126-141							
PEBN3_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-131	662-683						
PEFT1_VARV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	21-41							
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407							
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407							
PENV_AVRO	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	206-233							
PENV_AVSU	COAT PROTEIN GP37	AVIAN SARCOMA VIRUS (STRAIN UR2)	98-117							
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	170-190	201-224						
PENV_BIVM	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	47-68	178-201	434-450	533-546				
PENV_BIVT1	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	47-68	147-168	301-320	461-479	514-535			
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE FLK)	101-127							
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	101-127							
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE YDM)	101-127							
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB18B)	101-127							
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB19)	101-127							
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	101-127							
PENV_FENVI	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	610-631					
PENV_FIVPB	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	610-631					
PENV_FLVCD	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-4)	28-55	624-645						
PENV_FLVCK	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN ANGLAGOW-1)	9-29	447-468	605-626					
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	467-488	633-646						
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	444-465	603-623						
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	133-174	235-275	100-125	481-496	710-727	864-887	924-951	957-978
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	467-488	625-646						
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	447-468	605-626						
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	450-471	608-629						
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	467-488							
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	519-540							
PENV_HIV1B1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE)	491-520							
PENV_HIV1B8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE)	491-515							
PENV_HIV1BN	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	494-516							
PENV_HIV1BR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	501-523							

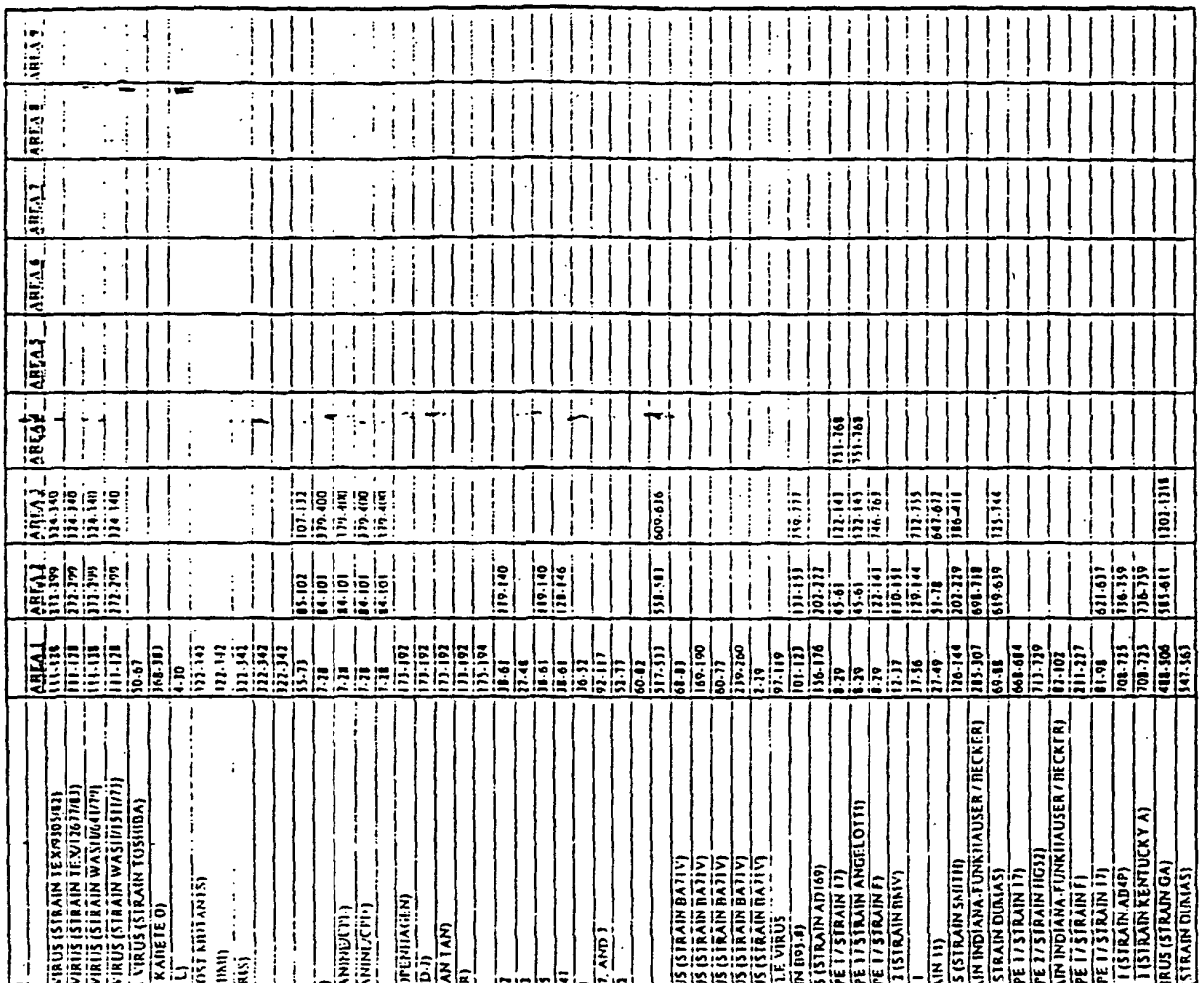
PCGENE	FUCTION	All Viruses (No Retroviruses)									
FILE NAME	PROTEIN	VIRUS									
PENV_HIVC4	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE	428,498								
PENV_HIVIEL	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE	495,517								
PENV_HIVIII	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE	498,330								
PENV_HIVIII	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE	498,330								
PENV_HIV111	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE	510,333								
PENV_HIVIIR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE	490,312								
PENV_HIVIKB	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN	504,336	537,399	545,364						
PENV_HIVIMA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	500,332								
PENV_HIVIMF	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MTA ISOLATE)	496,318								
PENV_HIVIN5	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	178,703								
PENV_HIVIND	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	488,310								
PENV_HIVIOY	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	133,140								
PENV_HIVIPV	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PVO ISOLATE)	498,330								
PENV_HIVIRI	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	445,460								
PENV_HIVIS1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	489,311	338,354							
PENV_HIVIS1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	300,332								
PENV_HIVJR2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 182/1 ISOLATE)	133,145	410,437	495,517						
PENV_HIVJR2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	117,133	135,198							
PENV_HIVJR2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	497,519								
PENV_HIVJR6	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	101,137								
PENV_HIVJR2H	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 182/1 ISOLATE)	133,142	438,433	498,520						
PENV_HIVJRBE	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	3,26	350,331	381,404						
PENV_HIVJCA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	756,777								
PENV_HIVJD1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	3,26	241,266	722,795						
PENV_HIVJD1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9,28								
PENV_HIVJO1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	741,766	722,795							
PENV_HIVJN2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	741,767	737,800							
PENV_HIVJRO	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	751,776								
PENV_HIVJSB	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	741,768	778,804							
PENV_HIVJST	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	745,770								
PENV_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	104,119	299,333	376,398	541,564					
PENV_MCFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	600,621								
PENV_MCFJ	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	601,621								
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	630,631								
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	633,646								
PENV_MLVFS	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	639,660								
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	639,660								
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-51)	639,660								
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOMBLY MURINE LEUKEMIA VIRUS (MUS MORITULANUS VIRUS)	636,647								
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	167,188								
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	629,650								
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	624,645								
PENV_MLVRK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	624,645								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	641,661								
PENV_MMTVG	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	641,661								
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	113,135								
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	170,191								
PENV_OMVVS	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	618,683								
PENV_RMCTV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	601,624								
PENV_RSVP	ENV POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	42,69	533,552							
PENV_SFVI	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	300,333	710,727	864,887	924,931	937,978				
PENV_SFVJL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1) STRAIN LK1)	137,138	704,719	801,884	924,931	937,948				
PENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	415,458								
PENV_SIVAG	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	417,461								
PENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRU-1)	421,442								
PENV_SIVAT	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	415,436								
PENV_SIVGB	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	93,109								

PCGENE	PIRCTL21P	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
ENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MNE143-83 ISOLATE)	766-793	801-826							
ENV_SIVK	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	759-786	793-792							
ENV_SIVMC	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	759-784	784-791	801-824						
ENV_SIV34	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PZ1MSH34 ISOLATE)	769-789	806-819							
ENV_SIVSP	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PRIMATE ISOLATE)	771-793	810-833							
ENV_SMSAV	PISE PROTEIN	SIMIAN SARCOMA VIRUS	42-63								
ENV_SRV1	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	211-235								
PEABA_AVIER	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	227-249								
PETF1_FOWPI	EARLY TRANSCRIPTION FACTOR	FOWLPOX VIRUS (STRAIN FP-1)	21-41	33-52							
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR	SHOPE FIBROMA VIRUS (STRAIN KASZA)	21-41								
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-41								
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN WR)	21-41	103-117	285-308	338-382					
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	50-73	103-117	285-308	338-382					
PETF2_VACCV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	48-72								
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	50-73	101-117	285-308	338-382					
PEXON_HSV11	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 11)	163-180								
PEXON_HSV2	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 2)	155-170								
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	216-291								
PEXON_PRVNI	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	36-51								
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	38-61	117-143							
PFIB2_ADE40	41-4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	116-133								
PFIB2_ADE41	41-4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	116-133								
PFIBP_ADE01	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 1	132-153								
PFIBP_ADE02	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 2	441-473								
PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3 (HASTADENOVIRUS BOS3)	1047-1072	775-801							
PFIBP_ADEC1	FIBER PROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	382-397								
PFIBP_ADEM1	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	191-215	227-253	648-671	775-799					
PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	33-78								
PGAG_AVEV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	2-27								
PGAG_AVIMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	33-78								
PGAG_AVIMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1111	33-78								
PGAG_AVISU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	33-78								
PGAG_AVISY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	33-78								
PGAG_BAEVM	GAG POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	397-422								
PGAG_BLVAU	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	213-238								
PGAG_BLVJ	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	213-239								
PGAG_CAEVC	GAG POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	102-119								
PGAG_FUSSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	33-78								
PGAG_HTLIA	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	77-94								
PGAG_HTLIC	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	77-94								
PGAG_HTLIM	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	77-94								
PGAG_HIVAJ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	65-91								
PGAG_HIVB1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	65-91								
PGAG_HIVB3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH5 ISOLATE)	65-91								
PGAG_HIVBR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	65-91								
PGAG_HIVC4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	65-91								
PGAG_HIVEL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	65-91								
PGAG_HIVH2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	65-91								
PGAG_HIVJ1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JH1 ISOLATE)	65-91								
PGAG_HIVJR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	65-91								
PGAG_HIVMA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	262-285								
PGAG_HIVNN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NN ISOLATE)	65-91								
PGAG_HIVNS	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	65-91								
PGAG_HIVND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	65-91	152-177							
PGAG_HIVOY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	65-91								
PGAG_HIVPV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	65-91								
PGAG_HIVRH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RF/HAT ISOLATE)	65-91								

PCGENE	PIR:I12IP	All Viruses (No Bacteriophage)								
ELEMABLE	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2
PGAG_HVIU4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISO	61-91							
PGAG_HVIW2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	61-91							
PGAG_HVIZ3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE/CDC-Z34 ISOLATE)	61-91							
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	337-372							
PGAG_MMTVD	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN HRS)	82-97							
PGAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	82-97							
PGAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	82-97							
PGAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	53-78							
PGAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	618-645							
PGAG_SFVI	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	84-101							
PGAG_SFVL	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1) STRAIN (LK3)	89-101							
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	189-211							
PGAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1 ISOLATE)	193-217							
PGAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	186-211							
PGAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ)	66-91							
PGAG_SIVDI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (SIVLAI)	66-91							
PGAG_SIVMI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)								
PGAG_SMRVH	GAG POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	216-307							
PGLRX_VACCC	POSSIBLE GLUTAREDOXIN	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	11-87							
PGLRX_VARV	POSSIBLE GLUTAREDOXIN	VARIOLA VIRUS	71-87							
PGRAN_OVAS	GRANULIN	AGROTIS SEGETUM GRANULOSIS VIRUS	208-276							
PGRAN_OVTN	GRANULIN	TRICHOPLUSIA NI GRANULOSIS VIRUS	209-227							
PGRFA_VACCC	GROWTH FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-124							
PGRFA_VACCV	GROWTH FACTOR	VACCINIA VIRUS (STRAIN WR)	104-123							
PGRFA_VARV	GROWTH FACTOR	VARIOLA VIRUS	104-122							
PHEL1_EBV	PROBABLE HELICASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	180-207	338-361	438-464					
PHEL1_HCMVA	PROBABLE HELICASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	397-420	539-560	826-851					
PHEL1_HSV11	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	389-408	638-646						
PHEL1_HSV1H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	290-309	529-554						
PHEL1_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	181-204	243-266	394-411					
PHEL1_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	337-350	389-411	638-681					
PHEL1_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	165-189	383-402	561-578	761-786				
PHEMA_CDVD	HEMAGGLUTININ-NEURAMINIDASE	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	16-51	200-223						
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	391-415							
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	391-415							
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEDUS)	391-415							
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC), AND (STRAIN L9)	391-415							
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	391-415							
PHEMA_CVMA5	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	403-433							
PHEMA_CVMS	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN S)	401-418							
PHEMA_IAA1C	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	37-59	322-339						
PHEMA_IAAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	21-43	106-133						
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	320-337							
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	320-337							
PHEMA_IACKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	81-101	231-247	316-333					
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	302-319							
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/83)	302-319							
PHEMA_IACKS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	319-336	335-352						
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	230-246							
PHEMA_IADAT	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76)	320-337							
PHEMA_IADAJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76)	37-59	322-339						
PHEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	320-337							
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	266-287	319-336						
PHEMA_IADI1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/5/77)	106-123							
PHEMA_IADI2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	21-43	106-123						
PHEMA_IADI3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/13/80)	21-43	106-123						
PHEMA_IADI4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/81)	21-43	106-123						

PCGENE		All Viruses (No Bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PIDEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/81)	21-41	115-337					
PIDEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/83)	21-41	106-333					
PIDEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	21-41	106-333					
PIDEMA_IADH8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	17-59	122-339					
PIDEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ANHUI/1/53)	28-50	141-161					
PIDEMA_IADM4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	326-337						
PIDEMA_IADN2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	17-59	122-339					
PIDEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/878/69)	21-41	106-333					
PIDEMA_IAEN6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/221/77)	17-59	122-339					
PIDEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	330-346	115-332					
PIDEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	326-337						
PIDEMA_IAGR1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GUILLEMAR YLAND/704/77)	326-337						
PIDEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/2117/84)	319-336						
PIDEMA_IAHA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	321-338						
PIDEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	330-346	115-332					
PIDEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/77)	330-346	115-332					
PIDEMA_IAHC8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C DETROIT/1/64)	330-346	115-332					
PIDEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	330-346	115-332					
PIDEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/1/76)	216-232	121-338					
PIDEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	321-338						
PIDEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/83)	296-232	121-338					
PIDEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/60)	330-346	115-332					
PIDEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/71)	330-346	115-332					
PIDEMA_IAHMD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	330-346	115-338					
PIDEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/76)	316-351	121-338					
PIDEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	315-332						
PIDEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	315-331						
PIDEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	316-331	121-338					
PIDEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/81)	326-232	121-338					
PIDEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/78)	330-346	115-332					
PIDEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/73)	330-346	115-332					
PIDEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	330-346	115-332					
PIDEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/1/71)	216-232	121-338					
PIDEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	216-232	121-338					
PIDEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	317-334						
PIDEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	197-333	319-336					
PIDEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	207-228	324-341					
PIDEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	17-59	122-339					
PIDEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	17-59	122-339					
PIDEMA_IAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	17-59	122-339					
PIDEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	21-41	106-333					
PIDEMA_IAMN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	65-101	331-347	116-133				
PIDEMA_IAN16	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	17-59	122-339					
PIDEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/MAINE/2/84)	326-337						
PIDEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QU/7/70)	21-41	306-323					
PIDEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43)	326-337						
PIDEMA_IASE3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	326-337						
PIDEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	324-350	331-348					
PIDEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/351/85)	326-246	115-332					
PIDEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1/80)	31-51	120-137					
PIDEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	330-346						
PIDEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	330-346						
PIDEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	299-345						
PIDEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	17-59	120-137					
PIDEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	18-60	122-340					
PIDEMA_IAWI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN WI/1)	17-59						
PIDEMA_IAWSN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/OLDSMAR/60/77)	17-59	122-339					

FEGENE	FUCTZIP	All Viruses (No Bacteriophage)								
FEGENE	FUCTZIP	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FIEMA_IAZIII	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	21-43	306-323						
FIEMA_IAZIII	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976)	21-43	306-323						
FIEMA_IAZIII	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKRELI/84)	37-59	322-339						
FIEMA_IAZUK	IIEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/1/86)	115-131	295-310						
FIEMA_INBAA	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	123-139	301-316						
FIEMA_INBBE	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	116-132	291-308						
FIEMA_INBBO	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/84)	123-139	301-316						
FIEMA_INBEN	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	108-124	286-301						
FIEMA_INBFU	IIEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/FUKUOKA/ATOM1)	119-135	296-311						
FIEMA_INBGL	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/GL/54)	116-132	291-308						
FIEMA_INBHK	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	108-124	288-303						
FIEMA_INBID	IIEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/IDAHO/80)	120-136	299-314						
FIEMA_INBLE	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	123-139	302-317						
FIEMA_INBMD	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	113-129	292-307						
FIEMA_INBME	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	116-132	296-311						
FIEMA_INBNA	IIEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/NAGASAKI/1/87)	108-124	288-303						
FIEMA_INBOR	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	123-139	301-316						
FIEMA_INBSI	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	120-136	298-313						
FIEMA_INBSJ	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	119-135	294-309						
FIEMA_INBUS	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	116-132	296-311						
FIEMA_INBVI	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	116-132	296-311						
FIEMA_INBVK	IIEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/87)	123-139	303-318						
FIEMA_INBYB	IIEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/16/88)	108-124	286-301						
FIEMA_INCCA	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	442-466							
FIEMA_INCEN	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	410-434							
FIEMA_INCGL	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	410-434							
FIEMA_INCHY	IIEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	429-453							
FIEMA_INCJH	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	443-467							
FIEMA_INCKY	IIEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	429-453							
FIEMA_INCMI	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	429-453							
FIEMA_INCNA	IIEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NAN/82)	429-453							
FIEMA_INCP1	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	410-434							
FIEMA_INCP2	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/15/81)	410-434							
FIEMA_INCP3	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	410-434							
FIEMA_INCTA	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	410-434							
FIEMA_INCYA	IIEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	410-434							
FIEMA_MUMP1	IIEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1)	101-125	133-148	235-246	367-394	397-417			
FIEMA_MUMPM	IIEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	101-125	133-148	235-246	367-394	397-417			
FIEMA_MUMPR	IIEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	101-125	133-148	235-246	367-394	397-417			
FIEMA_MUMPS	IIEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	101-125	133-148						
FIEMA_NDVA	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	93-110							
FIEMA_NDVB	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	93-110							
FIEMA_NDVD	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	93-110							
FIEMA_NDVI4	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN DI-ITICIONER/47)	93-110							
FIEMA_NDVI	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	93-110							
FIEMA_NDVM	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	93-110							
FIEMA_NDVQ	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	93-110							
FIEMA_NDVTO	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS GB/48)	93-110							
FIEMA_NDVU	IIEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	93-110							
FIEMA_PIIODV	IIEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	16-38	317-334	491-513					
FIEMA_PIIIIW	IIEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	25-51	323-342	145-160	486-501				
FIEMA_PIJII	IIEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	13-40	65-88	108-116					
FIEMA_PIJII	IIEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	13-40	65-88	108-116					
FIEMA_PIJIT	IIEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	111-128	272-289	324-340					
FIEMA_PIJIU	IIEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	111-128	272-289	324-340					
FIEMA_PIJIA	IIEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/12485/74)	111-128	272-289	324-340					
FIEMA_PIJIT	IIEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/45/80)	111-128	272-289	324-340					



PCGENE	PROTEIN	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS									
PIEMA_PIIHU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEXAS/583/83)	111-138	134-140							
PIEMA_PIIHV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEXAS/26778/83)	111-138	134-140							
PIEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASHINGTON/1/??)	111-138	134-140							
PIEMA_PIIHX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASHINGTON/1/??)	111-138	134-140							
PIEMA_PIIHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	10-67								
PIEMA_RINDK	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KANETE O)	168-183								
PIEMA_RINDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	4-20								
PIEMA_SENDJ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN 7 / HOST MONKEY)	122-142								
PIEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	122-142								
PIEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	122-142								
PIEMA_SEND2	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	122-142								
PIEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	15-31								
PIEMA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN WJ)	7-18	84-101	107-122						
PIEMA_SV5CA1	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CAN/81/1)	7-18	84-101	179-400						
PIEMA_SV5CP	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CAN/78/1)	7-18	84-101	179-400						
PIEMA_SV5LN	HEMAGGLUTININ-NEURAMINIDASE		7-18	84-101	179-400						
PIEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	173-192								
PIEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	173-192								
PIEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	173-192								
PIEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	173-192								
PIEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	135-154								
PIEX8_ADE01	EXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 2	38-61	179-140							
PIEX8_ADE03	EXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	27-46								
PIEX8_ADE05	EXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	38-61	149-140							
PIEX8_ADE41	EXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 41	38-61	128-146							
PIEX8_ADE41	EXON-ASSOCIATED PROTEIN PRECURSOR	MOUSE ADENOVIRUS TYPE 1	16-32								
PIEX9_ADE07	EXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7, AND 7	92-117								
PIEX9_ADEC1	EXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 1	53-77								
PIEX9_ADENT	EXON-ASSOCIATED PROTEIN	TUPAJA ADENOVIRUS	60-82								
PIHO-COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	517-533	558-583	600-616						
PI177_ASFB7	LATE PROTEIN I177L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	68-83								
PI196_ASFB7	LATE PROTEIN I196L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	169-190								
PI236_ASFB7	LATE PROTEIN I236R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	60-77								
PI239_ASFB7	LATE PROTEIN I239L PRECURSOR	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	239-260								
PI18_ASFB7	EARLY PROTEIN I18R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	2-19								
PIBAP-SOCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	97-119								
PIC18_EBV	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	101-123	131-153	156-177						
PIC18_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	136-176	207-227							
PIC18_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	8-29	45-61	122-141	151-168					
PIC18_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	8-29	45-61	122-141	151-168					
PIC18_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	8-29	122-141	146-167						
PIC18_HSV82	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN 86/1)	12-37	110-131							
PIC18_HSV8B	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EQUINE HERPESVIRUS TYPE 1	17-36	139-144	172-215						
PIC18_HSV8A	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	27-49	51-78	647-673						
PIC18_HCMV5	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	126-144	207-229	186-211						
PIC18_PRVF	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	215-307	698-718							
PIC18_VZVD	PROBABLE PROCESSING AND TRANSPORT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	69-88	619-639	135-144						
PICP0_HSV11	IMMEDIATE-EARLY PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	668-684								
PICP0_HSV2H	VMW110 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	713-729								
PICP0_PRVD	EARLY PROTEIN 0	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	87-102								
PICP1_HSV1F	INFECTED CELL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	211-227								
PICP4_HSV11	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	81-98	621-637							
PICP4_HSV2B	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGP)	108-125	136-159							
PICP4_HSV8K	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	708-725	736-759							
PICP4_HSVMG	TRANS-ACTING TRANSACTIVATOR PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	488-506	515-611	1301-1318						
PICP4_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	547-563								

PCGENE	PFICTLZIP	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PIE10_PRVIF	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN INDIANA-YUNKIN/AUJESZKY/BECKER)	231.948								
PIE10_PRVKA	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN KAPLAN)	226.733								
PIE10_HCMVA	TRANSCRIPTIONAL REGULATION IE180 HOMOLOGU	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	164.381	286.104							
PIE63_HSV11	TRANSCRIPTIONAL REGULATION IE63	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	178.394	178.394							
PIE63_HSV1H	TRANSCRIPTIONAL REGULATION IE63	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN HGH2)	178.394	178.394							
PIE63_HSV2U	TRANSCRIPTIONAL REGULATION IE63 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	133.353	183.406							
PIE63_HSV5A	63 KD IMMEDIATE-EARLY PHOSPHOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	100.176								
PIE68_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	189.205								
PIE68_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4	81.104								
PIE68_PRVKA	IMMEDIATE-EARLY PROTEIN	EQUINE HERPESVIRUS TYPE 1	93.116								
PIE68_VZVD	IMMEDIATE-EARLY PROTEIN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	85.108								
PIR10_HCMVA	HYPOTHETICAL PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	53.238								
PKERB_AVIER	ERBB TYROSINE KINASE TRANSFORMING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	117.817								
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN ERYTHROBLASTOSIS VIRUS	64.184								
PKFES_FSVST	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	297.324								
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN SNYDER-THELEN)	71.88								
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	2.22								
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRCII)	269.388								
PKFPS_FUJSV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	141.159	243.283	418.450	548.363	181.881	856.877			
PKITI_ASFB7	THYMIDINE KINASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	247.314	346.170	400.420	187.614					
PKITI_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	239.275								
PKITI_FLDV	THYMIDINE KINASE	FISH LYMPHOCYSTIS DISEASE VIRUS	1824								
PKITI_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	403.418	428.446							
PKITI_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN CL101)	96.117	233.275							
PKITI_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN HFEM)	223.249								
PKITI_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN KOS)	223.249								
PKITI_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN SC16)	223.249								
PKITI_HSV23	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2/STRAIN 333)	224.250	333.348							
PKITI_HSVB6	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 6660)	193.219	280.304							
PKITI_HSVBH	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN DN599)	180.702								
PKITI_HSVBM	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN WC11)	381.399	609.633							
PKITI_HSVBQ	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1.2 (STRAIN QUIDD)	194.220	282.306							
PKITI_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	174.193	261.284							
PKITI_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HVS25A)	11.33	174.193	274.298						
PKITI_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	171.189								
PKITI_HSVI1	THYMIDINE KINASE	ICTALURID HERPESVIRUS 1	14.32								
PKITI_HSVSA	THYMIDINE KINASE	MARMOSET HERPESVIRUS	189.215								
PKITI_HSVSM	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	208.233								
PKITI_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	183.203	208.234							
PKITI_VZV4	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 40A2)	197.216								
PKITI_VZV7	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 7.1-3)	197.216								
PKITI_VZVD	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	197.216								
PKITI_VZVO	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN OK)	197.216								
PKITI_VZVW	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (VZV)	197.216								
PKKIT_FSVHZ	KIT TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 4)	193.214	276.297							
PKR15_HSV11	GENE 13 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	151.167	258.314							
PKR16_HSV11	GENE 16 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	197.217	286.311							
PKR1_HSV11	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	180.396	258.377							
PKR1_HSV2	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 2)	276.396	358.377							
PKR1_HSVEB	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	189.107								
PKR1_HSVEK	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	189.107								
PKR1_VZVD	SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	178.187								
PKR2_EBV	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	196.211	113.318							
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	247.267								
PKR2_HSVEB	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	317.339	441.462							
PKR2_PRVNI	SERINE/THREONINE-PROTEIN KINASE 2	PSEUDORABIES VIRUS (STRAIN NIA-3)	164.185	242.305							

PFGENE	PFACTFILE	All Viruses (No Bacteriophage)							
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
PKR2_VZVD	PROBABLE SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	116-131	226-247	134-333					
PKR7_HSV1	GENE 73 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	841-858							
PKR14_HSV1	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	139-380	548-575						
PKRB1_VACCC	16 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	199-214							
PKRB1_VACCV	16 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	199-214							
PKRB1_VARV	16 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	199-214							
PKRF1_SFVKA	POSSIBLE PROTEIN KINASE C10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-98							
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-100							
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	52-67							
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	85-100							
PKROS_AVISU	ROS TYR KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN URJ)	6-29	202-223	284-305					
PKRYK_AVRPJ	TYR-PROTEIN KINASE TRANSFORMING PROTEIN R	AVIAN RETROVIRUS RPL30	154-172	221-241						
PKSEA_AVIET	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SE	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN S13)	158-177							
PKSRC_AVISJ	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PRJ13)	161-377							
PKSRC_AVISR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN RASV144)	161-377							
PKSRC_AVISS	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S1)	161-377							
PKSRC_AVIST	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S3)	161-377							
PKSRC_RSVHI	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN H-19)	161-377							
PKSRC_RSVP	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	161-377							
PKSRC_RSVPA	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PATHY)	158-374							
PKSRC_RSVSR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN SCHMIDT-RUPPIN)	161-377							
PKYES_AVISY	TYR-PROTEIN KINASE TRANSFORMING PROTEIN Y	AVIAN SARCOMA VIRUS (STRAIN Y73)	161-377							
PL100_ADE03	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	489-511							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	488-511							
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	458-480							
PL33_ADE03	LATE L1 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	311-359							
PL33_ADE05	LATE L1 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	117-159							
PLEC1_FOWPM	HEPATIC LECTIN HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438MUNICH)	3-76							
PLAP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-41	79-100						
PLAP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-41	79-100						
PLAP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-41	79-100						
PLMP1_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	181-196	204-326	267-288	291-315	346-369	390-410		
PMCEL_SFVKA	MRNA CAPPING ENZYME, LARGE SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	244-260	538-558	679-699					
PMCEL_VACCC	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-102	265-287	289-311	687-707				
PMCEL_VACCV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN WR)	81-102	265-287	289-311	687-707				
PMCEL_VARV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VARIOLA VIRUS	81-102	265-287	289-311	687-707				
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	313-343							
PMCE_REOVD	MRNA CAPPING ENZYME	REOVIRUS (TYPE 3 / STRAIN DEARING)	358-384	567-588	714-741					
PMOVP_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN S	137-172							
PMOVP_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN	137-172							
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	69-74	178-205						
PMOVP_PMMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	23-50	186-201						
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	186-201							
PMOVP_TMVCO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	88-107	136-171						
PMTCI_CHVRI	MODIFICATION METHYLASE CVRI	CHLORELLA VIRUS NC-1A	109-136							
PMTCI_CHVTI	MODIFICATION METHYLASE CVTII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1 (	72-94							
PMTCI_CHVNI	MODIFICATION METHYLASE CVBIII	CHLORELLA VIRUS NC-1A	177-192	263-286						
PMTBE_AVILE	PI3 I GAG-MYB-ETS TRANSFORMING PROTEIN (	AVIAN LEUKEMIA VIRUS E26	104-124							
PMYB_AVIMB	MYB TRANSFORMING PROTEIN	AVIAN MYELOBLASTOSIS VIRUS	218-238	301-326						
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	159-181							
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	84-99							
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	84-99							
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	11-30							
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	51-74							
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	317-343							
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC280)	428-446							
PNCAP_INNV	NUCLEOCAPSID PROTEIN	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	110-137	219-261						

PCGENE FILETAB	FUNCTION PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PNCAP_INSV	NUCLEOCAPSID PROTEIN	INFANTILE NECROTIC SPOT VIRUS	155-179						
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	40-59						
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	40-59						
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	40-59						
PNCAP_MUMP1	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	156-178						
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	156-178						
PNCAP_PIIV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	36-58	218-236	236-277	277-346			
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	42-58	86-102					
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	42-58	86-102					
PNCAP_PIIB	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	161-184						
PNCAP_PIIH4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	161-184						
PNCAP_PUDMI	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	36-58	221-246					
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	36-58	218-236	121-246				
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	299-322						
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	299-322						
PNCAP_RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	299-322						
PNCAP_RVFV2	NUCLEOCAPSID PROTEIN	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	138-160						
PNCAP_SENDI	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z/HOST MUTANT5)	39-51	86-102					
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	42-58	86-102					
PNCAP_SENDH	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	42-58	86-102					
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	39-51	86-102					
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	112-138	317-342					
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	136-181						
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACAIBE VIRUS	219-241						
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	187-189						
PNCAP_VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	240-266						
PNCAP_VHSVN1	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN NAKAI)	240-266						
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC	64-80						
PNCAP_VSVSJ									
PNEP_HVIRO	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	110-129						
PNEP_HVIST	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	106-128						
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/703/78)	3-39						
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	3-34						
PNRAM_IADAI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	3-34						
PNRAM_IADKE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	3-39						
PNRAM_IAFOW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	3-39	101-117					
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COR/16/74)	3-39	299-315					
PNRAM_IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-39						
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/35/79)	3-34						
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	3-34						
PNRAM_IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/AMPHISTIII-AMEILANY/49N)	3-30						
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	3-30						
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-30						
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/80)	3-39						
PNRAM_IASH1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/STEARWATER/AUSTRALIA/72)	3-39						
PNRAM_IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	3-34	36-77					
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	3-39						
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	3-34						
PNRAM_IAWDM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILDEMANE/1/84)	3-39						
PNRAM_IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/1/33)	3-30						
PNRAM_INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	3-20						
PNRAM_INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	3-20						
PNRAM_INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	3-20						
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	3-20						
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	3-20						
PNRAM_INBMF	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/NEW JERSEY/75)	3-20						
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/ORGEON/1/80)	3-20						

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PNRAM_INBSI	CROTOX	VIRUS	1..20	----	----	----	----	----	----	----	----	----
PNRAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN SINGAPORE/222/79)	1..20	----	----	----	----	----	----	----	----	----
PNRAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN MASSACHUSETTS/1/80)	1..20	----	----	----	----	----	----	----	----	----
PNRAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN VICTORIA/2/87)	1..20	----	----	----	----	----	----	----	----	----
PNSI_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	135-151	----	----	----	----	----	----	----	----	----
PNSI_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	1..36	196..221	381..406	----	----	----	----	----	----	----
PNSI_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	60..78	----	----	----	----	----	----	----	----	----
PNSS_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (ISOLATE BRAZILIAN ISOLATE CNPH1MR-01)	80..105	431..455	----	----	----	----	----	----	----	----
PNSS_TSWVS	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	80..105	436..458	----	----	----	----	----	----	----	----
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	20..43	387..407	----	----	----	----	----	----	----	----
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	20..43	387..407	----	----	----	----	----	----	----	----
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	293..309	----	----	----	----	----	----	----	----	----
PP100_HSV6U	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS TYPE 6 / STRAIN UGANDA-1102)	182..204	344..366	250..270	----	----	----	----	----	----	----
PPAP2_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	79..100	----	----	----	----	----	----	----	----	----
PPAP2_MYXVA	POLY(A) POLYMERASE REGULATORY SUBUNIT	MYXOMA VIRUS (ISOLATE AUSTRALIA/ABRAMS/1961)	101..116	----	----	----	----	----	----	----	----	----
PPAP2_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	101..116	----	----	----	----	----	----	----	----	----
PPAP2_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	101..116	----	----	----	----	----	----	----	----	----
PPAP2_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	101..116	----	----	----	----	----	----	----	----	----
PPCNA_NPVAC	PROLIFERATING CELL NUCLEAR ANTIGEN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	67..89	327..344	----	----	----	----	----	----	----	----
PPE1_NPVOP	211 KD PROTEIN IN PE 3'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	117..139	----	----	----	----	----	----	----	----	----
PPE1_NPVAC	311 KD PROTEIN IN PE P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	37..83	----	----	----	----	----	----	----	----	----
PPE1_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	17..33	----	----	----	----	----	----	----	----	----
PPEN1_ADE01	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 2	171..195	----	----	----	----	----	----	----	----	----
PPEN1_ADE05	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 5	171..195	----	----	----	----	----	----	----	----	----
PPEN1_ADEGX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SA2)	194..214	307..324	----	----	----	----	----	----	----	----
PPIV2_ADE01	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	413..435	----	----	----	----	----	----	----	----	----
PPIV2_ADEMI	MATURATION PROTEIN	MOUSE ADENOVIRUS TYPE 1	409..419	----	----	----	----	----	----	----	----	----
PPOL1_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	339..355	935..956	1031..1054	1879..1910	----	----	----	----	----	----
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN H-1)	339..355	935..956	1072..1094	1465..1485	1888..1909	----	----	----	----	----
PPOL1_GCNV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	691..717	1040..1062	1116..1141	----	----	----	----	----	----	----
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	180..196	477..501	545..564	1079..1098	1149..1171	----	1741..1756	1821..1848	2020..2044
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	1112..1139	----	----	----	----	----	----	----	----	----
PPOL1_ARMV	RNA1 POLYPROTEIN	ARABIS MOSAIC VIRUS	1127..1150	1741..1766	1946..1971	----	----	----	----	----	----	----
PPOL2_BAYMO	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	323..340	461..485	----	----	----	----	----	----	----	----
PPOL2_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN H-1)	323..340	461..485	----	----	----	----	----	----	----	----
PPOL3_GFLV	RNA3 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	808..829	1021..1045	----	----	----	----	----	----	----	----
PPOL3_TBRVS	RNA3 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	423..446	541..563	636..656	1201..1221	----	----	----	----	----	----
PPOL3_TRSVR	RNA3 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	316..340	423..448	1327..1354	----	----	----	----	----	----	----
PPOL6_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	1815..1859	----	----	----	----	----	----	----	----	----
PPOL6_BVDVN	GENOME POLYPROTEIN	DOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	627-653	941..965	1110..1134	1282..1309	1363..1387	1868..1892	2460..2487	2608..2638	2881..2898
			3141..3161	3326..3341	3836..3871	1967..3986						
PPOL6_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	627-653	941..965	1110..1134	1138..1161	1189..1205	1282..1291	1361..1387	1778..1802	2370..2397
			2518..2538	2741..2766	2791..2808	3766..3781						
PPOL6_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	850..867	----	----	----	----	----	----	----	----	----
PPOL6_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (ECHO 9 VIRUS)	67..92	----	----	----	----	----	----	----	----	----
PPOL6_COXAP	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1491..1517	1807..1826	----	----	----	----	----	----	----	----
PPOL6_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1472..1498	1582..1607	----	----	----	----	----	----	----	----
PPOL6_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	228..253	1475..1501	1585..1610	----	----	----	----	----	----	----
PPOL6_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	821..846	1473..1499	1583..1608	----	----	----	----	----	----	----
PPOL6_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1475..1501	1585..1610	----	----	----	----	----	----	----	----
PPOL6_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	918..943	1111..1136	1241..1260	1612..1638	1832..1848	2148..2165	2401..2426	1050..1069	----	----
PPOL6_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	919..944	1112..1139	----	----	----	----	----	----	----	----
PPOL6_DEN31	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (ISOLATE MALAYSIA M1)	336..354	----	----	----	----	----	----	----	----	----
PPOL6_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	840..868	918..944	1112..1139	1244..1261	1283..1301	1613..1629	2293..2318	2547..2564	2405..2435	----
			2706..2726	----	----	----	----	----	----	----	----	----
PPOL6_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-TDK51)	840..868	918..944	1112..1139	1244..1261	1283..1301	1776..1796	1611..1629	2293..2318	2147..2164	----
			2405..2435	2700..2726	----	----	----	----	----	----	----	----
PPOL6_DEN3D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN D3/H/94)	840..868	918..944	----	----	----	----	----	----	----	----

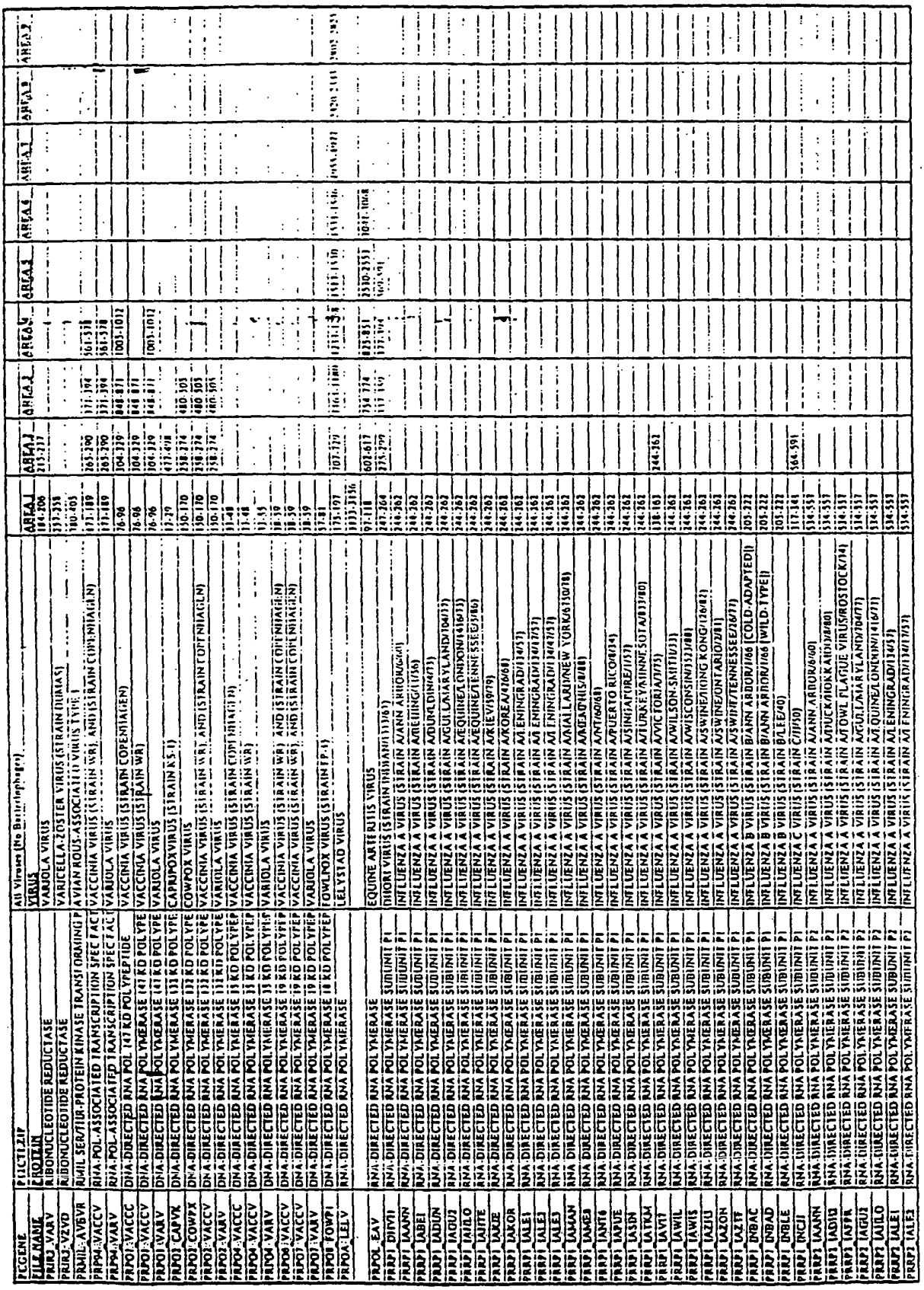
PGGENE	PIECTGIP	All Viruses (No Restrictions)										
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PPOLG_DENJI	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	1700-2126	919-944	171-196	164-191	1234-1261	1236-1263	1236-1263	1236-1263	1236-1263	1236-1263
PPOLG_DENIN	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN NEW GUINEA C)	100-120	919-944	1192-1219	1244-1271	1281-1308	1236-1263	1613-1639	1290-2115	2364-2391	2402-2428
PPOLG_DENJP	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159-S1)	2697-2723	619-644	812-839	964-991	1301-1329	1236-1263	1613-1639	1290-2115	2364-2391	2402-2428
PPOLG_DENIT	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN ITHACA 1974)	2698-2724	919-944	1210-1236	1244-1271	1281-1308	1236-1263	1613-1639	1290-2115	2364-2391	2402-2428
PPOLG_DENI	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2209-2237	1241-1268	1611-1637	2220-2246	2342-2369	2400-2426	1045-3064			
PPOLG_DEN4	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY	664-690	774-799								
PPOLG_ECI1G	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	225-247	538-578	1194-1215	1650-1667						
PPOLG_ENCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D MONDAMIN TOKUSHIMA)	560-580	1170-1141	1196-1217							
PPOLG_ENCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-HOUGHTON)	560-580	1170-1141	1196-1217							
PPOLG_ENCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	560-580									
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	493-513									
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	131-141	979-998								
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	131-141	984-1003	1016-1035	1396-1411	1465-1487	1764-1781				
PPOLG_FMDV3	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A1)	162-183									
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10)	121-140	984-1003	1016-1035	1396-1411	1465-1487	1761-1780				
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND OUFS) (	131-141	984-1003	1016-1035	1396-1411	1465-1487	1761-1780				
PPOLG_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU/C-581)	201-220									
PPOLG_HCV	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	131-141	979-998								
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	102-128	143-169	619-640	778-800	2170-2197	2318-2338	2127-2147	2441-2458	2767-2782	
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	102-128	1037-1063	1143-1169	1282-1301	1778-1802	2170-2197	2318-2338	2127-2147	2767-2782	
PPOLG_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	112-133	143-169	619-640	681-699	837-861	1172-1188	1837-1853	2859-2881	1011-1030	
PPOLG_HCVEC1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC1)	27-53									
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	112-133	143-169	619-640	681-699	837-861	1827-1853	2127-2147	2859-2881	1011-1030	
PPOLG_HCVHV	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	112-133	143-169								
PPOLG_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT77)	1541									
PPOLG_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	27-53									
PPOLG_HCVHK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-KF)	112-133	143-169								
PPOLG_HCVJ1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1)	112-133	143-169	619-640	681-699	837-861	1172-1188	1837-1853	2859-2881	1011-1030	
PPOLG_HCVJ5	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	112-133	143-169	637-644	681-699	837-861	1172-1188	1837-1853	2859-2881	1011-1030	
PPOLG_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	112-133	143-169	637-644	681-699	837-861	1172-1188	1837-1853	2859-2881	1011-1030	
PPOLG_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	143-169	637-644	681-703							
PPOLG_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	112-133	143-169	637-644	681-703	837-861	1172-1188	1837-1853	2859-2881	1011-1030	
PPOLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPAN/S1)	112-133	143-169	619-640	681-699	837-857	861-880	1837-1847	2816-2858	1008-1007	
PPOLG_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1)	112-133	143-169	619-640	681-699	837-857	861-880	1837-1847	2816-2858	1008-1007	
PPOLG_HCVTH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TH)	27-53									
PPOLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	112-133	143-169	619-640	681-699	837-857	1827-1847	2127-2147	2441-2458	2816-2858	2988-1007
PPOLG_IDAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 1 (HC-1)	101-122									
PPOLG_IDAV3	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	401-428	799-819	1195-1210	1687-1708	2009-2031	2068-2092	1068-2092			
PPOLG_IDAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 4C)	799-819	1195-1210	1687-1708	2009-2031	2068-2092					
PPOLG_IDAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	799-819	1195-1210	1687-1708	2009-2031	2068-2092					
PPOLG_IDAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	799 819									
PPOLG_IDAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	778 798									
PPOLG_IDAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	799-819	1195-1210	1688-1709	2009-2034	2069-2093					
PPOLG_IDAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	799-819	1195-1210	1688-1709	2009-2034	2069-2093					
PPOLG_IDAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	799-819	1195-1210	1688-1709	2009-2034	2069-2093					
PPOLG_IDAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	1199-1214	1690-1711	2011-2037	2072-2096						
PPOLG_IDVI4	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14	1130-1106	1962-1981								
PPOLG_IDVIA	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	161-179	547-563								
PPOLG_IDVIB	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	386-404	572-587	859-876	1029-1052	1453-1478	1623-1641	1816-1842	1941-1961		
PPOLG_IDV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	569-586	694-711	1022-1043	1446-1469	1618-1634	1809-1833	1841-1865			
PPOLG_IDV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	576-591	1018-1061	1279-1315	1732-1758	1460-1481	1612-1648	1823-1869	1948-1968		

PEGENE	PIRCTLZIP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS									
PPOLO_HUMVI	(HUMAN PICORNAVIRUS POLYPROTEIN)	HUMAN PICORNAVIRUS (STRAIN ROMPLE)	1992:1515								
PPOLO_IBDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN UH)	903:922								
PPOLO_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	938:963	1106:1335	1642:1658	2145:2370	2326:2351	2462:2481			
PPOLO_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	938:963	1106:1335	1642:1658	2145:2370	2326:2351	2462:2481			
PPOLO_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	938:963	1106:1335	1642:1658	2145:2370	2326:2351	2462:2481			
PPOLO_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	866:891	1134:1351							
PPOLO_KUNIN	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	901:926	1103:960	1643:1659	2146:2371	2327:2352	2463:2482	2663:2683	2841:2858	
PPOLO_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	1798:2814 67:89	537:551	136:156	815:862	1153:1170	1539:1554	1610:1653	3158:3187	3310:3357
PPOLO_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YTALNISEV)	2366:2387 67:89	2424:2441 537:551	1766:1784						
PPOLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	67:89	537:551	815:862						
PPOLO_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SD 326)	247:271								
PPOLO_MOCA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	120:137	1174:1199	1402:1428	1781:1805	1872:1887	2012:2027	2810:2827		
PPOLO_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	19:36								
PPOLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	331:347	563:578	937:962	1305:1324	1523:1548	1585:1602	1641:1657		
PPOLO_ONV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	90:110	111:126	678:696	891:904					
PPOLO_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	690:717	826:846	1009:1024	1301:1318	1435:1452	1484:1500	1676:1697	1921:1945	2002:2022
PPOLO_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1409:1432								
PPOLO_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1410:1433								
PPOLO_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN LANSING)	1408:1431								
PPOLO_POLIW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1408:1431								
PPOLO_POLIJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN 2ji21)	1377:1394	1407:1410							
PPOLO_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PALEONOT AND PIGEON 12A[1]D)	1377:1394	1407:1410							
PPOLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	1351:1378	551:571	714:741	1078:1115	1468:1495	1497:1513	2606:2624	1084:1106	
PPOLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	981:999	1461:1483							
PPOLO_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	1351:1378	713:740	1097:1114	1481:1498	1496:1512	2605:2623	1068:1090		
PPOLO_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	1351:1378	713:740	1097:1114	1481:1498	1496:1512	2605:2623	1083:1103		
PPOLO_PRSVH	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA)	372:390								
PPOLO_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA 5-1)	163:181								
PPOLO_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	163:181								
PPOLO_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DP11)	47:63	231:268	136:153	634:674	981:1001	1411:1428	1565:1592	2708:2726	
PPOLO_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	355:376								
PPOLO_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	355:376	964:982	1010:1016	1109:1125	1436:1453	1485:1501	1637:1658	1922:1946	2588:2606
PPOLO_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	1004:1026 355:376	964:982	1010:1016	1109:1125	1436:1453	1485:1501	1637:1658	1922:1946	2590:2608
PPOLO_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	355:376								
PPOLO_PVYV1	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	593:616	1336:1353	1626:1651	1903:1924	2621:2642	2702:2723	2766:2783		
PPOLO_STEVM	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	1301:1324								
PPOLO_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	39:56								
PPOLO_SVDVI	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UD '76)	1475:1501	1585:1610							
PPOLO_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG2/72)	1475:1501	1585:1610							
PPOLO_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	67:89	537:551	1167:1183	1518:1534	1610:1653	1740:1761	2130:2157	2366:2387	2765:2783
PPOLO_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	67:89	537:551	833:862	1519:1544	1610:1653	2130:2157	2366:2387	2766:2784	
PPOLO_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV	827:853	933:950	1016:1042	1114:1130	1307:1324	1490:1506			
PPOLO_THEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8386)	924:941	1074:1095	1119:1140	1520:1546	1658:1677				
PPOLO_THEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1072:1093	1117:1138	1518:1544	1656:1675					
PPOLO_THEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	641:670	924:941	1074:1095	1119:1140	1520:1546	1658:1677			
PPOLO_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	23:39	970:991	1138:1156	1513:1535					
PPOLO_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	404:428	497:517	660:687	850:866	967:992	1357:1374	2537:2562		
PPOLO_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	199:218								
PPOLO_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	535:552	931:956	1703:1722	1639:1655	1240:1267	2356:2369	2417:2437	3838:3855	3795:3811
PPOLO_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	74:93	1157:1179	1228:1248	1383:1405	1495:1511	1625:1641	1761:1778	2270:2294	
PPOLO_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	74:93	1157:1179	1228:1248	1383:1405	1495:1511	1625:1641	1761:1778	2270:2294	
PPOLO_YEFV3	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899/81)	74:93								
PPOLN_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1410:1433								
PPOLN_EEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON)	96:107	795:814	1001:1018	1153:1170	1921:1939	2129:2144	2301:2321		

PCGENE	PIRCLUSTER	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
CDLENAME	PROTEIN	VIRUS	443-469	748-766	901-913	1069-1088				
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68/FIV)	100-126							
PPOLN_FCVF4	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	100-126	262-281	919-945	1224-1247	1378-1397	1545-1564		
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	117-136	259-278	1274-1291					
PPOLN_IEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	250-266	1274-1291						
PPOLN_IEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	250-266	1272-1289						
PPOLN_IEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	250-266	1274-1291						
PPOLN_IEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	249-265	1271-1288						
PPOLN_MIDDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	488-512	624-643	700-720					
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	90-107	613-634	2148-2163	2220-2240				
PPOLN_RIBDV	NONSTRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	116-180	196-213	299-320	679-705	1130-1151	1437-1455	1471-1490	
PPOLN_RHDV1	NONSTRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351)	115-135							
PPOLN_RVGN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	89-106	611-632	2115-2128	2185-2205				
PPOLN_RVT1	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	182-203	854-874						
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	14-31	97-113	263-279	670-694	901-918	1374-1391	2035-2052	
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	91-108	613-631	2063-2077	2144-2164				
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO/STRAIN EDSDYN 81-5)	610-646	1131-1150	1794-1814	2148-2164	2220-2240			
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	610-646	1131-1150	1744-1763	2146-2164	2220-2240			
PPOLR_EPMV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	808-833							
PPOLR_OYMV	RNA REPLICASE POLYPROTEIN	ONONIS YELLOW MOSAIC VIRUS	707-727	941-962						
PPOLR_TYMV	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS	212-233	416-433	1173-1192					
PPOLR_TYMVA	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	212-233	416-433	1173-1192					
PPOLR_TYMVC	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (ISOLATE 1 YANC)	212-233	416-433	1173-1192					
PPOLS_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	33-50	313-329	491-507					
PPOLS_EEEVJ	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	33-50	314-330	492-508					
PPOLS_EEVVE	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	32-48	339-355	504-522					
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON	32-48	339-355	504-522					
PPOLS_IBDV5	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	900-922							
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN CU	900-922							
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	900-922							
PPOLS_IBDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	881-901							
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	900-922							
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	688-708							
PPOLS_RVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	1216-1243							
PPOLS_RUBVII	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	181-201							
PPOLS_RUBVM	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN M33)	180-201							
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	181-202							
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN	181-202	1041-1060						
PPOLS_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	15-39	731-752	760-801					
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO/STRAIN EDSDYN 81-5)	33-52							
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	33-52							
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	16-31	909-931						
PPOL_AVIBS	POL POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	281-303							
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	526-544	973-993	999-1019	1070-1091				
PPOL_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	101-119	742-768	861-889					
PPOL_BIV27	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	101-119	742-768	861-889					
PPOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	487-504							
PPOL_BLVJ	POL POLYPROTEIN (REVERSE TRANSCRIPTASE	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	487-504							
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	391-419	636-611						
PPOL_CAMVC	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	184-204	380-407	471-494					
PPOL_CAMVD	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D11)	175-199	373-402	466-489					
PPOL_CAMVE	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	184-204	380-407	471-494					
PPOL_CAMVN	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	70-97	183-205	381-408	472-495				
PPOL_CAMVS	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	184-204	380-407	471-494					
PPOL_CEVV	ENZYMATIC POLYPROTEIN	CARNATION ETCHED RING VIRUS	161-186	455-478						
PPOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	220-243	1386-1411	1606-1632	1641-1665				
PPOLE_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	437-456							
PPOL_FIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	437-456							

PCGENE FILE NAME	PIRCLZIP PROTEIN	All Viruses (No Bacteriophages) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOL_EIAVV	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	498-455	536-816							
PPOL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS (CEE)	183-401	733-775							
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PLALUMA)	407-426	733-775							
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	407-426	735-775							
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	406-425	663-690	735-775	1041-1060					
PPOL_FMVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	191-212	464-481							
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS	126-147	768-788							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	59-80	971-991	1048-1071						
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	330-346								
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	330-346								
PPOL_HTLV2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	609-627								
PPOL_HIV1A1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	860-887								
PPOL_HIV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (D110 ISOLATE)	633-660	877-899							
PPOL_HIV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (D115 ISOLATE)	877-899								
PPOL_HIV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	877-899								
PPOL_HIV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	633-647	859-886							
PPOL_HIV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB3 ISOLATE)	860-887								
PPOL_HIV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	864-891								
PPOL_HIV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	859-886								
PPOL_HIV1NN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NAN ISOLATE)	861-890								
PPOL_HIV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	633-648	860-887							
PPOL_HIV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	633-647	859-886							
PPOL_HIV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	860-887								
PPOL_HIV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	633-660	877-899							
PPOL_HIV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RF/HAT ISOLATE)	859-886								
PPOL_HIV1U6	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (STRAIN UGANDA/1150	859-886								
PPOL_HIV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (Z2/CDC-Z34 ISOLATE)	633-647	859-886							
PPOL_HIV1Z6	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ZAIRE 6 ISOLATE)	5-21								
PPOL_HIV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	879-906	907-934							
PPOL_HIV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	865-913								
PPOL_HIV2DI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	897-924	925-952							
PPOL_HIV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	907-934								
PPOL_HIV2GI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	359-386	887-914							
PPOL_HIV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	341-364	771-792	887-914						
PPOL_HIV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	888-915								
PPOL_HIV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	359-386	887-907							
PPOL_HIV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	379-406	907-934							
PPOL_IPIA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	186-190	198-225	460-477						
PPOL_IPMA	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	183-201	209-236	506-523	531-552	769-789				
PPOL_IPMAJ	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	102-120	128-155	407-423	425-442					
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RE)	186-213	307-336	660-679						
PPOL_MCFFJ	POL POLYPROTEIN	NONK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	317-53								
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	611-671	728-744							
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	335-354	928-948	1004-1017	1081-1097					
PPOL_MLVCB	POL POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	84-84	90-110	167-183						
PPOL_MLVFS	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	340-359	983-1003	1009-1029	1086-1103					
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	340-359	983-1003	1009-1029	1086-1102					
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	340-359	983-1003	1009-1029	1086-1102					
PPOL_MLVMO	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	335-354	928-948							
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	335-354	928-948	1004-1024	1081-1097					
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	363-383	389-409	466-482						
PPOL_MMTVB	POL POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	196-219	731-751							
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	741-761								
PPOL_OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	369-395	469-488	632-647	1045-1061					
PPOL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	719-742								
PPOL_RTBV	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	891-915	1058-1083							
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	891-915	1058-1081							

PCGENE	FUNCTION	All Viruses (No Bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILE NAME	PROTEIN	VIRUS								
PPOL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	188-204	333-356	845-869	916-991				
PPOL_SFV3L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	186-206	333-358	847-871	978-993				
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	695-915							
PPOL_SIVAGO	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	311-326	700-920						
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	899-926							
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	726-741	915-935						
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	884-911							
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	660-695	869-896						
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	180-407	908-935						
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	180-407	711-737	906-931					
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ6SM14 ISOLATE)	343-370	871-898						
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJMC13 ISOLATE)	346-373	874-901						
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS	348-368							
PPOL_SMSAV	POL POLYPROTEIN	SIMIAN SARCOMA VIRUS	100-120	177-204						
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	131-155							
PPOL_SRV1	POL POLYPROTEIN	SIMIAN RETROVIRUS	343-363							
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	488-507	651-666	971-991					
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	488-507	651-666	971-991					
PPOL_VILV3	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K53)	488-507	651-666	971-991					
PPP15_HCMVA	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133-151	183-210						
PPP28_HCMVA	28 KD STRUCTURAL PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-141							
PPP41_HSV6G	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	158-175	396-411						
PPP65_HCMVA	65 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	311-333							
PPP65_HCMVT	64 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	101-333							
PPP71_HCMVA	71 KD UPPER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-102							
PPR1I_MMTVB	PROTEIN PR1I	MOUSE MAMMARY TUMOR VIRUS (STRAIN RR6)	40-61							
PPR1I_MMTVG	PROTEIN PR1I	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61							
PPR1R_MMTVG	PROTEIN PR1I	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61							
PRASH_MSVHA	TRANSFORMING PROTEINS P21 AND P29	HARVEY MURINE SARCOMA VIRUS	69-73							
PRASH_RSASV	TRANSFORMING PROTEINS P21 AND P29	RASHEED RAT SARCOMA VIRUS	56-80							
PREEP_CSV	REPEAT ELEMENT PROTEIN	CAMPYLOBACTER SPUTORUM VIRUS	114-136							
PREPR_VACCV	RIFAMPICIN RESISTANCE PROTEIN	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	274-298	316-335	517-535					
PREPR_VARV	RIFAMPICIN RESISTANCE PROTEIN	VARIOLA VIRUS	274-298	316-335	517-535					
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	2-17							
PREV_SIVGB	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	45-71							
PRIR1_ASFKU	RIBONUCLEOSIDE DIPHOSPHATE REDUCTASE	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	139-164	189-210	495-510					
PRIR1_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	793-812							
PRIR1_HCMVA	RIBONUCLEOTIDE REDUCTASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	192-212	665-684						
PRIR1_HSV1I	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	413-430	587-613						
PRIR1_HSV2B	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	60-85	266-288	668-694					
PRIR1_HSV5A	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	136-151							
PRIR1_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	36-51							
PRIR1_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	36-51							
PRIR1_VARV	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	36-51							
PRIR1_VZVD	RIBONUCLEOTIDE REDUCTASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	34-58	221-247	238-280					
PRIR2_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	209-236							
PRIR2_HSV1I	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	44-66	275-292						
PRIR2_HSV1K	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	43-65	245-261	274-291					
PRIR2_HSV2I	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	41-63	272-289						
PRIR2_HSV5I	RIBONUCLEOTIDE REDUCTASE	BOVINE HERPESVIRUS 1 TYPE 1 (STRAIN 14)	244-266							
PRIR2_HSV2B	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	61-88	251-277						
PRIR2_HSV5A	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	212-239							
PRIR2_SFVKA	RIBONUCLEOTIDE REDUCTASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	184-206	215-237						
PRIR2_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	184-206							
PRIR2_VACCP	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN L-IVP	184-206							
PRIR2_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	184-206							



PCGLINE	FUCTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILENAME	PROTEIN	VIRUS							
PRRP1_IAP10	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN ADNTAILALDER1A/1979)	334-557						
PRRP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	334-557						
PRRP1_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/A	334-557						
PRRP1_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	334-557						
PRRP1_IATKH	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/ARKANSAS/1972/80)	334-557						
PRRP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	68-86						
PRRP1_IAZ10	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	334-557						
PRRP1_IAZ11	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	334-557						
PRRP1_IAZ1T	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/75)	330-557						
PRRP1_IVBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	33-54						
PRRP1_IVB6D	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	33-54						
PRRP1_IVB5I	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	33-54						
PRRP1_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	406-425						
PRRP1_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	219-234	342-360					
PRRP1_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HONK KONG/1/77)	219-234						
PRRP1_IACHI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	219-234	342-360					
PRRP1_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	219-234	342-367					
PRRP1_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	219-234	342-360					
PRRP1_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GUILLMARYLAND/7/0477)	219-234	342-360					
PRRP1_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GUILLUASTRAKHAN/1/1984)	219-234	342-360					
PRRP1_IAIK6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	219-234	342-360					
PRRP1_IAILO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	219-234	342-360					
PRRP1_IAIPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	219-234	342-360					
PRRP1_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	342-360						
PRRP1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	219-234	342-360					
PRRP1_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1/57)	219-234	342-360					
PRRP1_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/2/57)	219-234	342-360					
PRRP1_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	219-234	342-360					
PRRP1_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	219-234	342-360					
PRRP1_IAMES	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1		219-234	342-360					
PRRP1_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN ANTI60/68)	219-234	342-360					
PRRP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	219-234	466-485	342-360				
PRRP1_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/A7	219-234	342-360					
PRRP1_IASE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	219-234	342-360					
PRRP1_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	219-234	342-360					
PRRP1_IATKH	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/ARKANSAS/1972/80)	219-234	342-360					
PRRP1_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	219-234	342-360					
PRRP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	219-234	342-360					
PRRP1_IAZ11	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	219-234	342-360					
PRRP1_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	219-234	342-360					
PRRP1_IBBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	71-86	335-361					
PRRP1_IBB6D	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	71-86	335-361					
PRRP1_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	74-96	332-351					
PRRP1_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	74-96	332-351					
PRRP1_THOGV	RNA-DIRECTED RNA POL SUBUNIT P3	THOGOTO VIRUS	85-101						
PRRPA_CV103	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	82-104	410-436	618-638	1482-1507	1533-1547	1543-1568	2124-2149
PRRPA_CVMJD	RNA-DIRECTED RNA POLYMERASE	MURINE HEPATITIS VIRUS (STRAIN DEFECTIVE JHM)	440-467						
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	917-938	1188-1215	1318-1334	1432-1449	1461-1480	1567-1585	1783-1805
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	2470-2494	2660-2676	2944-2961	3229-3255	3405-3425	3933-3954	2165-2192
PRRPB_CVMA3	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	606-632	1509-1537	1718-1757	2137-2154			
PRRPB_CVMJ3	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	383-412	1303-1324	1535-1550	2078-2123			
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	383-412	1302-1324	1535-1550	2078-2123			
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	173-200	482-508	1613-1644	2696-2711			
PRRPB_CVPR8	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM/137004/BRITISH	80-106						
PRRPB_IBYB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	140-164	338-365	887-911	1335-1352	1654-1674		
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	31-41	146-161					

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)										
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	78-104	101-324	440-465	1096-1116	1317-1338	1491-1465	1519-1544	1869-1886	1901-2023	
PRRPL_EBOV	RNA-DIRECTED RNA POLYMERASE	EBOLA VIRUS	16-31									
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	131-168	173-194	496-611	1561-1585	2081-2105					
PRRPL_IRSV	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	3-19									
PRRPL_IRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	3-19	1181-1206	1435-1461	1633-1653	1939-1960	2018-2037				
PRRPL_MABVA1	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	15-30	144-169	217-240	317-341	471-492	546-569	931-946	1042-1063	1410-1436	
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	1711-1731 15-30	1990-2017 144-169	2071-2094 217-240	2671-2694 317-341	2723-2746 471-492	2946-2969 546-569	3111-3126 931-946	3242-3267 1042-1067	3410-3436 1410-1436	3671-3696
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	1715-1731 285-313	1805-1833 917-933	1990-2017 998-1023	2671-2694 1160-1185	2723-2746 1239-1264	2946-2969 1920-1940	3111-3126 2038-2063	3242-3267	3410-3436	3671-3696
PRRPL_MUMPN	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	43-66	110-135	165-190	963-988	1100-1124	1132-1153	1601-1627	2118-2143		
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C43)	704-724	1331-1357	1967-1994	2040-2063	2507-2530	2985-3010	3215-3234			
PRRPL_PIIHH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	109-124	268-291	308-334	1109-1133	1507-1528	1985-2010	2205-2224			
PRRPL_PIIJH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN NIH 47885)	172-191	304-330	444-461	885-909	1845-1868	2068-2084	2117-2134			
PRRPL_PUUKSI	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	173-194	396-411	1361-1385	1677-1696	2086-2110					
PRRPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	266-286	343-363	1441-1461	1492-1517						
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	266-286	343-363	1441-1461	1492-1517	1744-1761					
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	10-27	333-360	680-697	1791-1816						
PRRPL_RVFV2	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	587-609	1009-1035	1784-1810	1844-1867	1885-1900	1405-1420	1844-1864	2107-2128		
PRRPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	64-83	104-130	194-218	1225-1240	1664-1684	1885-1900	1405-1420	1844-1864	2107-2128	
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	14-38	664-681	705-720	1225-1240	1664-1684	1885-1900	1405-1420	1844-1864	2107-2128	
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	64-83	104-130	194-218	1225-1240	1664-1684	1885-1900	1405-1420	1844-1864	2107-2128	
PRRPL_SEOUR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	151-168	173-194	394-419	596-611	1561-1585	2081-2105				
PRRPL_SV5WR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	43-66	108-134	265-289	1094-1118	1135-1147	1518-1580	2117-2137			
PRRPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIII/08-01)	126-146	391-406	605-627	704-721	863-881	886-911	1484-1510	1776-1792		
PRRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	938-974	1185-1410	1778-1800	2609-2627	2678-2702					
PRRPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN IIA)	698-714	913-938	1404-1431	1870-1891	2060-2081					
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OU)	136-153	313-339	903-928	1956-1982	2080-2097					
PRRPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	136-153	312-339	1956-1982	2080-2101						
PRRPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	226-247	1036-1054	1137-1155	1775-1791						
PRRPO_BWYVS	PUTATIVE RNA-DIRECTED RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	299-326									
PRRPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	359-386	391-416	505-532							
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	359-386	391-416	505-532							
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	359-386	391-416	505-532							
PRRPO_CAMV	PROBABLE RNA-DIRECTED RNA POL	CARNATION MOTTLE VIRUS	4-30	92-107	127-150	810-833						
PRRPO_CGMVS	PUTATIVE RNA-DIRECTED RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN S	403-466	514-591	1017-1032	1322-1339						
PRRPO_CNV	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER NECROSIS VIRUS	277-300	344-371	470-494							
PRRPO_CRV	PUTATIVE RNA-DIRECTED RNA POL	CYMBIDIUM RINGSPOT VIRUS	96-111	145-171	470-494							
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	221-238									
PRRPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	35-51	597-613	659-682	988-1008	1214-1236	1770-1795	2073-2099			
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	35-52									
PRRPO_MCMV	PROBABLE RNA-DIRECTED RNA POL	MAIZE CHLOROTIC MOTTLE VIRUS	16-41	101-127	373-399							
PRRPO_PEAMV	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	144-161	316-336	431-456	538-574						
PRRPO_PLRVI	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN 1)	331-358	578-600								
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	331-358	578-600								
PRRPO_PMMVS	PUTATIVE RNA-DIRECTED RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	173-193	702-726	1069-1096	1491-1507						
PRRPO_RCMMV	PUTATIVE RNA-DIRECTED RNA POL	RED CLOVER NECROTIC MOSAIC VIRUS	278-300									
PRRPO_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN DJ/ONES)	681-176									
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	681-176									
PRRPO_ROTBR	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	132-156	247-269	844-861	904-921	942-963	1017-1046				
PRRPO_ROTBU	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	132-156	247-269	844-861	904-931	942-963	1017-1046				
PRRPO_ROTPC	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	198-223	256-274	318-337	759-784	836-858	916-932				
PRRPO_ROTPO	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN OSU)	32-51	112-136	247-269	844-861	904-921	942-963	1027-1046			
PRRPO_ROTSI	RNA-DIRECTED RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	132-156	247-269	844-861	904-921	942-963	1017-1046				
PRRPO_SBMV	PROBABLE RNA-DIRECTED RNA POL	SOUTHERN BEAN MOSAIC VIRUS	38-64	122-143	188-206	387-402	444-466	631-643	825-846			
PRRPO_TACV	RNA POLYMERASE	TACARIBE VIRUS	88-107	165-189	1281-1301	1636-1692	1819-2046					

PCGENE	P1:CTLZIP	All Viruses (No Bacteriophage)								
ELKNAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA2	AREA2	AREA1	AREA1	AREA2
PRRPO_TBSVC	PUTATIVE RNA-DIRECTED RNA POL	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	273-300	341-371	470-494					
PRRPO_TCV	PUTATIVE RNA-DIRECTED RNA POL	TURNIP CRINKLE VIRUS	31-58	241-265						
PRRPO_TMGMV	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	209-231	1035-1100						
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (VULGARE)	100-724	1090-1105	1387-1610					
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	700-724	1090-1105	1387-1610					
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN TOMATO L)	700-724	1090-1105	1151-1170	1387-1610				
PRRPO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A)	113-135							
PRRPO_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	5-26							
PRRP_CHAV	RNA POLYMERASE ALPHA SUBUNIT	CHANDIPURA VIRUS (STRAIN 1653134)	124-146							
PRRP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	211-238							
PRRP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	211-239							
PRRP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	213-239							
PRRP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	216-276							
PRRP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN HERTS/33)	136-276							
PRRP_PI1H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS	216-243							
PRRP_PI1HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	216-243							
PRRP_PI1JA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1A VIRUS (STRAIN TOSHIBA)	220-247							
PRRP_PI1KB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1B VIRUS (STRAIN 61-333)	213-239							
PRRP_PIRY	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-161							
PRRP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	8-32							
PRRP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	8-32							
PRRP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	8-32	216-237						
PRRP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	8-32	216-237						
PRRP_RABV5	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	8-32	216-237						
PRRP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	199-226	182-201						
PRRP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OD	197-223							
P33TR_ASFB7	33 KDA PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	196-218							
P3ODC_VACCC	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-40							
P3ODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-40							
P3ODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	19-40							
P3PIB_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	58-79	627-646						
P3PIB_CBEPV	SPHEROIDIN PRECURSOR	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	177-201							
P3PII_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	62-80	217-243						
P3WTA_SPVKA	3 WTBA PROTEIN	SWINEPOX VIRUS (STRAIN KASZA)	61-83							
P1ALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	354-369							
P1ALA_POVBA	LARGE T ANTIGEN	POLYOMA VIRUS BK (STRAIN AS)	202-224	429-444						
P1ALA_POVBK	LARGE T ANTIGEN	POLYOMA VIRUS BK	202-224	429-444						
P1ALA_POVBO	LARGE T ANTIGEN	BOVINE POLYOMA VIRUS	185-400							
P1ALA_POVHA	LARGE T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69	349-364						
P1ALA_POVJC	LARGE T ANTIGEN	POLYOMA VIRUS JC	201-223	428-443						
P1ALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMA VIRUS	43-69	516-542						
P1ALA_POVMJ	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN 1)	316-591							
P1ALA_POVNA	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN A2)	574-589							
P1ALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	571-586							
P1ALA_POVMK	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN KILHAM)	173-191	378-394	446-472					
P1ALA_SV40	LARGE T ANTIGEN	SIMIAN VIRUS 40 (SV40)	200-222	427-442						
P1AMD_POVHA	MIDDLE T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69							
P1ASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69							
P1ASM_POVLY	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMA VIRUS	43-69							
P1ASM_POVMK	SMALL T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN KILHAM)	43-69	67-89						
P1ATR_NPVAC	TRANS-ACTIVATING TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	406-431							
P1ATR_NPVBM	TRANS-ACTIVATING TRANS REG PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	411-436							
P1ATR_NPVOP	TRANS-ACTIVATING TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	389-414							
P1AT_BIV06	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	44-59							
P1AT_BIV27	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	44-59							
P1AT_HTLIA	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	192-210							
P1AT_HTLIC	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	192-210							

FEGENE	PICTLIP	All Viruses (No Bacteriophage)									
ENTRY NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4	AREA5	AREA5
PTAT_HVIUU	TAT PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN/ISO	18-43									
PTCB_FLV	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	9-32	98-118								
PTEGP_HSVEB	PROBABLE TEGUMENT PHOSPHOPROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-118									
PTEGP_HSVEK	TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	101-118									
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	143-166	767-789	814-835	1052-1075	1194-1220	1469-1496	1869-1893	2061-2077	3102-3126	
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	342-358	644-668	1061-1077	1307-1322	1323-1345	1419-1446	1509-1536	1937-1974	2199-2221	
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	12-27	623-646	1732-1759							
PTEGU_HSV60	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	131-152	345-365	615-636	1027-1043	1308-1328	1562-1579				
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	432-456	539-581	1072-1099	1107-1132	1618-1640	1764-1791	2263-2285			
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	467-491	714-737	989-1008	1121-1137	1155-1174	1177-1191	1503-1525	1607-1632	1898-1915	
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	2421-2439	433-456	711-728	801-823	895-920	1013-1034	1360-1376	1632-1657	1780-1807	
			1008-2029	2270-2287	2694-2711							
PTERM_ADE01	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	63-80	591-616								
PTERM_ADE05	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	63-80	591-616								
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	63-80	580-603								
PTERM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	46-63	334-350	346-369							
PTOP2_ASFB7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	119-146	686-707								
PTOP2_ASFM3	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI/LIL 20/1)	119-146	685-706								
PTR14_HCMVA	HYPOTHETICAL PROTEIN TRL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	139-165									
PTREL_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	36-74									
PTYSY_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	11-29									
PUI3R_HSV6U	POSSIBLE GANCICLOVIR KINASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	400-413									
PUL2_HSV6U	PROTEIN 2L	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	4-27									
PUDPE_NPVAC	UDP-GLUCOSYL TRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	432-457									
PUL01_HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-49									
PUL03_HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-37									
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	233-268									
PUL06_HCMVA	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-208									
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-429									
PUL06_HSVEB	VIRION GENE 38 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	437-461									
PUL06_HSVSA	VIRION GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	44-60									
PUL07_EBV	BBRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	127-149									
PUL07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-108	186-209								
PUL07_HSV11	PROTEIN UL7	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	173-200									
PUL07_HSVEB	GENE 35 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	11-31									
PUL07_HSVSA	GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	44-61									
PUL07_VZVD	GENE 35 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	158-176	202-224								
PUL08_HSV11	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	514-538	765-776								
PUL08_VZVD	GENE 51 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	228-255	593-616								
PUL09_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	564-584									
PUL09_HSVEB	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	171-196	612-638								
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	88-97	168-190	484-508							
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	223-247									
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	449-467									
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	280-299									
PUL14_HSV11	HYPOTHETICAL UL14 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	96-116									
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	100-127									
PUL16_HSV11	PROTEIN UL16	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	22-49									
PUL16_HSVEB	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	26-43	98-119	324-339							
PUL16_HSVSA	GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	69-87	278-295								
PUL16_VZVD	GENE 44 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	63-80	117-132								
PUL17_EBV	PROTEIN BGLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	273-293									
PUL17_HCMVA	HYPOTHETICAL PROTEIN UL17	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-82									
PUL17_HSV11	PROTEIN UL17	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	136-181									
PUL17_HSVSA	GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	94-118	348-370								
PUL19_HCMVA	HYPOTHETICAL PROTEIN UL19	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	61-85									

PCGENE	PIR:T12JP	All Viruses (No Bacteriophage)									
ELEMAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PUL20_PRVND	UL20 MEMBRANE PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	34-76								
PUL20_VZVD	GENE 39 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201-224								
PUL21_HCMVA	HYPOTHETICAL PROTEIN UL21	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	91-110								
PUL21_HSV11	PROTEIN UL21	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	98-114	130-146							
PUL21_HSV1B	PROTEIN UL21	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 10EM)	98-114	130-146							
PUL21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	119-142	294-321	379-403	412-437					
PUL21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	270-293	300-327							
PUL22_HCMVA	HYPOTHETICAL PROTEIN UL22	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	44-67								
PUL24_EBV	PROTEIN BXRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	114-135								
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	206-222								
PUL24_HSV11	PROTEIN UL24	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	147-166								
PUL24_ILTVT	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V811)	158-179								
PUL25_HCMVA	HYPOTHETICAL PROTEIN UL25	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	484-500								
PUL25_HSV11	VIRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	86-101								
PUL25_HSVEB	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-104	130-147							
PUL25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	244-265	344-368							
PUL25_ILTVT	641 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V811)	270-287	316-336							
PUL27_HCMVA	HYPOTHETICAL PROTEIN UL27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	307-324	486-507							
PUL29_HCMVA	HYPOTHETICAL PROTEIN UL29	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	239-266								
PUL30_HCMVA	HYPOTHETICAL PROTEIN UL30	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-33								
PUL31_EBV	PROTEIN BFLF2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	273-296	382-402							
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	410-437								
PUL31_HSV11	PROTEIN UL31	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	95-116								
PUL31_HSVEB	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-125	288-309							
PUL31_HSVSA	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	145-161	169-190							
PUL31_VZVD	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-138	295-316							
PUL33_HSV11	PROBABLE MAJOR ENV GLYCOPROTEIN UL33	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	121-143	564-585							
PUL33_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	81-108								
PUL33_VZVD	PROBABLE MAJOR ENV GLYCOPROTEIN 28	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	551-574								
PUL33_HCMVA	O-PROTEIN COUPLED REC HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	76-102								
PUL34_HCMVA	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	214-232	297-321							
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	231-253								
PUL34_HSVEB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	249-264								
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	201-219								
PUL34_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	244-266								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	228-252	310-329	331-348						
PUL36_HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	143-168	387-410							
PUL37_EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	21-36	135-155	707-730	984-1004					
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	229-252	262-277	445-467	665-681	758-777	925-947	1009-1028		
PUL37_HSVEB	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	414-440	491-510	664-690	778-803	901-919				
PUL37_HSVSA	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	5-20								
PUL37_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	4-19	104-124	140-165	168-191	196-212	229-244	248-269	670-694	776-803
			904-923								
PUL38_HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	199-220								
PUL40_HCMVA	HYPOTHETICAL PROTEIN UL40	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	18-33								
PUL41_HCMVA	HYPOTHETICAL PROTEIN UL41	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	115-31	116-134							
PUL41_HSV11	MEMBRANE PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-43	119-160	161-165	394-421					
PUL41_HSVEB	GENE 17 MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	34-60	86-107							
PUL43_VZVD	GENE 13 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	88-114	127-146	160-180	277-299	374-400				
PUL45_HSV11	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	23-46								
PUL45_HSVIK	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	23-46								
PUL45_HSVIM	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	23-46								
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	193-218	438-464	533-556	614-640	741-766				
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-425								
PUL47_HSVIF	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	404-423								
PUL47_HSVBP	80 T KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	681-702								
PUL47_HSVE4	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	580-601								

PCGENE	PICTLIF	All Viruses (No Bacteriophage)							
GLE NAME	EXPLAIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PUL47_HSVEB	91 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	337-408						
PUL47_VZVD	ALPHA TRANS-INDUCING FACTOR 91 0 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	42-58	608-627					
PUL48_EBV	HYPOTHETICAL BFRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	336-358						
PUL49_HCMVA	HYPOTHETICAL PROTEIN UL49	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	248-264	328-343					
PUL49_HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	226-252						
PUL49_HSVSA	HYPOTHETICAL GENE 66 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	222-233						
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	98-119						
PUL51_HSV11	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 11)	49-66						
PUL51_HSVE4	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	100-120						
PUL51_HSVEB	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	106-129						
PUL51_VZVD	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	30-49						
PUL52_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	44-59						
PUL53_HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	17-37	65-91					
PUL53_HSVE4	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	8-27						
PUL53_HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	8-27	115-139	116-111				
PUL53_HSVSA	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	499-508	586-605					
PUL53_VZVD	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	446-466	645-670					
PUL53_HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	173-188						
PUL53_HSVGU	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	64-80						
PUL60_HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	126-141						
PUL63_HCMVA	HYPOTHETICAL PROTEIN UL63	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	62-84	178-203					
PUL68_HCMVA	HYPOTHETICAL PROTEIN UL68	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	83-107						
PUL70_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	335-352	409-430	499-514	626-645	770-793		
PUL71_HCMVA	HYPOTHETICAL PROTEIN UL71	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	234-250						
PUL73_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	62-87						
PUL73_HSVSA	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	51-73						
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-32						
PUL77_HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	268-291	607-628					
PUL78_HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	71-90	190-205					
PUL79_HCMVA	HYPOTHETICAL PROTEIN UL79	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	40-58						
PUL80_HCMVA	61 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	100-116						
PUL80_HCMVT	61 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	100-116						
PUL81_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	406-422	530-547					
PUL87_HCMVA	HYPOTHETICAL PROTEIN UL87	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	203-231	309-335	606-628	633-653	733-781		
PUL87_HSVGU	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	201-222	507-529					
PUL87_HSVSA	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	165-187	402-422	579-595				
PUL88_HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	173-191	333-379					
PUL88_HSVGU	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	136-173						
PUL90_HCMVA	HYPOTHETICAL PROTEIN UL90	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-58						
PUL91_HSVGU	HYPOTHETICAL PROTEIN 8R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	43-65						
PUL92_HCMVA	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	76-99						
PUL92_HSVGU	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	36-55	100-119					
PUL94_HCMVA	PROTEIN UL94	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	49-70						
PUL95_EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	201-223						
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	508-526						
PUL95_HSVGU	HYPOTHETICAL PROTEIN 12R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	9-30	328-346					
PUL95_HSVSA	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-209						
PUL97_HCMVA	GANCICLOVIR KINASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208-228	341-367					
PUL102_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	168-183						
PUL103_HCMVA	PROTEIN UL103	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-47						
PUL104_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-235	412-430					
PUL108_HCMVA	HYPOTHETICAL PROTEIN UL108	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	93-110						
PUL111_HCMVA	HYPOTHETICAL PROTEIN UL111	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-81						
PUL113_HCMVA	HYPOTHETICAL PROTEIN UL113	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	298-319						
PUL117_HCMVA	HYPOTHETICAL PROTEIN UL117	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	178-195						
PUL118_HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-130						
PUL121_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	129-153						

PCGENE FILE NAME	PIRCTLZIP PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PUL03_HCMVA	HYPOTHETICAL PROTEIN UL133	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-22								
PUNO_FOWPI	URACIL-DNA GLYCOSYLASE	FOWLPOX VIRUS (STRAIN FP-1)	12-37								
PUNO_HSVEB	URACIL-DNA GLYCOSYLASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	224-250								
PUNO_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-103								
PUNO_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	82-103								
PUNO_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	82-103								
PUNO_VZVD	URACIL-DNA GLYCOSYLASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	217-243								
PUS03_HSVEB	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	48-63								
PUS01_HSVEK	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	48-63								
PUS02_PRVNJ	PROTEIN US1 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	126-136								
PUS03_HSV11	PUTATIVE GLYCOPROTEIN US3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	24-39								
PUS03_HSV2	PUTATIVE GLYCOPROTEIN US3	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	53-70								
PUS09_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HERPES SIMPLEX VIRUS (TYPE 2)	53-70								
PUS11_HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-206								
PUS12_HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	98-113								
PUS13_HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	29-50	113-135	195-222						
PUS19_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-33	208-231	214-232						
PUS11_HCMVA	HYPOTHETICAL PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	216-260								
PUS15_HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	378-402	441-466							
PUS16_HCMVA	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	131-174	241-267							
PUS17_HCMVA	HYPOTHETICAL PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	110-126								
PUS19_HCMVA	MEMBRANE PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-142	178-202	214-232						
PUS21_HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-67	155-182							
PUS22_HCMVA	EARLY NUCLEAR PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-292								
PUS23_HCMVA	HYPOTHETICAL PROTEIN HVLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	292-310								
PUS24_HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	332-353								
PUS28_HCMVA	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-49	140-160							
PUS28_HCMVT	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	34-49	140-160							
PUS29_HCMVA	HYPOTHETICAL PROTEIN HXBF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	246-269								
PUS30_HCMVA	HYPOTHETICAL PROTEIN HXBF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102-128	208-233							
PUS33_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-59								
PV01K_ILSV	7 KD PROTEIN	ILLY SYMPTOMLESS VIRUS	27-46								
PV01K_PNRV	7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	28-49								
PV01K_PVSP	7 KD PROTEIN	POTATO VIRUS X (PVX)	31-48								
PV01K_PVX	7 KD PROTEIN	POTATO VIRUS X (STRAIN X0)	31-48								
PV01K_PVXX	7 KD PROTEIN	POTATO VIRUS X (STRAIN XC) (STRAIN CP)	31-48								
PV117_ASFL5	L15 (11-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L15/7)	73-94								
PV121_ASFL5	123 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	59-79								
PV13K_PVMR	12 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	79-96								
PV13K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	24-31								
PV143_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	79-102	846-863	1013-1037						
PV14K_BSMV	14 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	14-29	86-99							
PV18K_MLVAB	18 KD PROTEIN	ABELSON MURINE LEUKEMIA VIRUS	29-44	128-154							
PV19K_VACCV	PROTEIN B19	VACCINIA VIRUS (STRAIN WR)	114-132	152-173							
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	186-220	252-271							
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	747-767								
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	744-763								
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	775-800								
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	775-800								
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	774-799								
PV1A_PSVI	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	472-491	783-808							
PV2BK_HSVTH	33.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN HP)	176-191								
PV31K_PLRV1	31 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (	60-76	192-207							
PV31K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	60-76	192-207							
PV39K_BWYVF	39 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	22-43	136-157							
PV39K_PEBV	39.6 KD PROTEIN	PEA EARLY BROWNING VIRUS	114-132								
PV3A_BMV	3A PROTEIN	BROME MOSAIC VIRUS	285-303	759-777							

PEGENE	PIRCTLZIP	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PV2A_COMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	196-314							
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	214-215							
PV10K_TRVTC	10 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	62-82							
PV11K_TOBSV	11 KD PROTEIN	TOBACCO STREAK VIRUS (STRAIN WC)	226-250							
PV16J_ASFB7	K-196 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	145-164							
PV19J_ASFL5	LIS 175 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L151)	114-135							
PV19J_ASFL5	LIS 301 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L151)	114-135							
PV2A_COMV	COWPEA CHLOROTIC MOTTLE VIRUS		160-187							
PV2A_CMVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	214-235							
PV2A_CMVM	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	214-235							
PV2A_CMVO	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	214-235							
PV2A_CMVQ	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	214-235							
PV2A_CMVY	CUCUMBER MOSAIC VIRUS (STRAIN Y)		214-235							
PV2A_IBVB	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	5-28							
PV2A_IBVM	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	5-28							
PV2A_IBVP2	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN PORTUGAL/1/82)	5-28							
PV2A_IBVUS	2A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/1/66)	5-28							
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	187-188							
PV38K_BSMV	38 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	120-140							
PV68K_BWYVF	PROTEIN 6B	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	97-116							
PV70K_TYMVA	69 KD PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	12-35							
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	44-59							
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	213-244							
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	213-244							
PVA04_VARV	PROTEIN A4	VARIOLA VIRUS	203-234							
PVA09_VACCC	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-66							
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	41-66							
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	33-44	140-159	299-317					
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	33-44	141-160	300-318					
PVA14_VACCC	PROTEIN A14	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-62							
PVA14_VARV	PROTEIN A14	VARIOLA VIRUS	59-62							
PVA16_VACCC	PROTEIN A16	VACCINIA VIRUS (STRAIN COPENHAGEN)	341-362							
PVA16_VARV	PROTEIN A16	VARIOLA VIRUS	340-361							
PVA18_VACCC	36 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	439-461							
PVA18_VACCV	36 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	439-461							
PVA18_VARV	36 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	439-461							
PVA20_VACCC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	107-131	193-209						
PVA20_VARV	PROTEIN A20	VARIOLA VIRUS	107-131	193-209						
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	58-82							
PVA28_VACCV	PROTEIN A28	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	53-76							
PVA28_VARV	PROTEIN A28	VARIOLA VIRUS	53-76							
PVA32_VACCV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	109-220							
PVA32_VARV	PROTEIN A32	VARIOLA VIRUS	175-190							
PVA35_VACCC	PROTEIN A35 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	33-49							
PVA35_VACCV	PROTEIN A35 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	33-49	141-164						
PVA37_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-90							
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	66-90							
PVA40_VACCC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-30							
PVA41_VACCC	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-71							
PVA41_VACCV	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	47-71							
PVA41_VARV	PROTEIN A41 PRECURSOR	VARIOLA VIRUS	47-71							
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-79	201-226						
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	59-79	201-226						
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	59-79	201-226						
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	247-266	384-404						
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	247-266	384-404						
PVAL1_BCTV	ALI PROTEIN	BEET CURLY TOP VIRUS	56-73							

PCGENE	PIRCTLIP	All Viruses (No Bacteriophage)	AREA 1	AREA 1	AREA 2	AREA 1	AREA 3	AREA 4	AREA 2	AREA 3	AREA 2
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 1	AREA 3	AREA 4	AREA 2	AREA 3	AREA 2
PVAL1_CLVK	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	55-74	---	---	---	-				
PVAL1_CLVN	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	55-74	---	---	---	---				
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS	81-108	---	---	---	---				
PVAL2_CLVK	AL2 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-97								
PVAL2_CLVN	AL2 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-97								
PVAL2_TYLCM	AL2 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	78-97								
PVAL2_TYLCV	AL2 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	77-97								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	134-157								
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	134-157								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	134-157								
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	134-157								
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	134-157								
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	134-157								
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	134-60								
PVAT_CERV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	141-161								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	132-159								
PVB01_VACCC	PROTEIN B2	VACCINIA VIRUS (STRAIN COPENHAGEN)	135-170								
PVB01_VACCC	PROTEIN B2	VACCINIA VIRUS (STRAIN WR)	135-170								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)									
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	489-511								
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-511								
PVB05_VACCO	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	231-271								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	231-271								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	231-271								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	231-271								
PVB06_VACCV	PROTEIN B6	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	59-82								
PVB15_VACCC	PROTEIN B15	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVB15_VACCV	PROTEIN B15	VACCINIA VIRUS (STRAIN WR)	121-143								
PVB15_VARV	PROTEIN B15	VARIOLA VIRUS	121-143								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	137-179								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)									
PVBL1_CLVK	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-51								
PVBL1_CLVN	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-51								
PVBR1_SLCV	BR1 PROTEIN	SQUASH LEAF CURL VIRUS	245-268								
PVBR1_ABMVW	BR1 PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	166-191								
PVBR1_BGMV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-191								
PVBR1_PYMVV	BR1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	166-191								
PVBR1_SLCV	BR1 PROTEIN	SQUASH LEAF CURL VIRUS	193-218								
PVC01_VACCC	PROTEIN C1	VACCINIA VIRUS (STRAIN COPENHAGEN)	70-90								
PVC01_VACCV	PROTEIN C1	VACCINIA VIRUS (STRAIN WR)	75-95								
PVC01_VARV	PROTEIN C1	VARIOLA VIRUS	58-78								
PVC01_SFVKA	HYPOTHETICAL PROTEIN C1	SHOPE FIBROMA VIRUS (STRAIN KASZA)	8-31								
PVC01_SFVKA	G-PROTEIN COUPLED RECEPTOR HOMOLOG C1	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-133	179-197							
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	182-209								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	183-208								
PVC06_SFVKA	HYPOTHETICAL PROTEIN C6	SHOPE FIBROMA VIRUS (STRAIN KASZA)	20-47								
PVC08_SFVKA	HYPOTHETICAL PROTEIN C8	SHOPE FIBROMA VIRUS (STRAIN KASZA)	14-30								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-59								
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	40-59								
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-109								
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-64								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	42-64								
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	42-64								
PVC16_VACCC	PROTEIN C16/B11	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-68								
PVC17_VACCC	PROTEIN C17/B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	301-326								
PVC21_VACCC	PROTEIN C21/B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-28								
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-172	366-381	1012-1053						

PEGENE FILE NAME	PIUCTLZIP PROTEIN	AD Viruses (No Hatteriophage) VIRUS	AREA1 668-884	AREA1 842-860	AREA1 911-991	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	283-302	358-384	1137-1153	1					
PVCAP_H1SV1	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	351-383	872-898							
PVCAP_H5VEB	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	144-188	269-287	357-372	1063-1089					
PVCAP_H5VSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	335-362								
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	381-401	891-910	1156-1176						
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	80-81								
PVCD1_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	12-39								
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-39								
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-39								
PVD01_VARV	PROTEIN D1	VARIOLA VIRUS	12-39								
PVD03_FOWPI	91.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	346-365	335-337	171-198						
PVD03_SFVKA	PROTEIN D1	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-78								
PVD03_VACCC	PROTEIN D3	VACCINIA VIRUS (STRAIN COPENHAGEN)	320-340	694-714	715-734						
PVD03_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	320-340	694-714	715-734						
PVD05_VARV	PROTEIN D3	VARIOLA VIRUS	320-340	694-714	715-734						
PVDBP_CAMVC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	37-56								
PVDBP_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/I)	37-56								
PVDBP_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/C)	37-56								
PVDBP_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	37-56								
PVDBP_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	37-56								
PVE03_VACCC	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	70-97	335-380	540-558						
PVE03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	70-97	335-380	540-558						
PVE03_VARV	PROTEIN E3	VARIOLA VIRUS	70-97	335-380	540-558						
PVE03_VACCC	PROTEIN E5	VACCINIA VIRUS (STRAIN COPENHAGEN)	314-329								
PVE03_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN DARREN 1)	324-339								
PVE03_VACCV	PROTEIN E5	VACCINIA VIRUS (STRAIN WR)	324-339								
PVE05_VARV	PROTEIN E5	VARIOLA VIRUS	324-339								
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	430-451								
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	430-451								
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	251-267	420-451							
PVE08_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-270								
PVE08_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	254-270								
PVE08_VARV	PROTEIN E8	VARIOLA VIRUS	254-270								
PVE11_HPV16	PROBABLE E1 PROTEIN 2	HUMAN PAPILLOMAVIRUS TYPE 16	167-183								
PVE10_NPVAC	EARLY 185 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	106-133								
PVE1_BPV1	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	265-281	517-533							
PVE1_BPV2	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 2	265-281	516-533							
PVE1_CRPVK	E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	7-22								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	238-273	311-334							
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	208-224								
PVE1_HPV16	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	264-281	317-333	344-364						
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	313-334								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	238-260								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	116-134								
PVE1_HPV45	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	161-180								
PVE1_HPV43	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 43	104-120								
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	238-260								
PVE1_HPV68	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	238-253	311-334							
PVE1_POVI	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	257-274	310-326							
PVE1_RHPV1	E1 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	286-309								
PVE1_CRPVK	PROBABLE E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	308-333								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	283-310								
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	253-320								
PVE1_HPV16	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	288-306								
PVE1_HPV1A	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 1A	284-300								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	311-336								
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	304-322								

PEGENE	PIECTEZIP	All Viruses (No Bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
LINKNAME	EPROTEIN	VIRUS								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	273-293							
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	289-307							
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	292-310							
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	121-318							
PVE1_HPV57	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	307-318							
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	286-311							
PVE1_PAPVD	PROBABLE E1 PROTEIN	DEER PAPILLOMAVIRUS	333-351							
PVE1_PCPVI	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	291-320							
PVE1_RUPVI	E1 PROTEIN	RABBITS PAPILLOMAVIRUS TYPE 1	290-308							
PVE1_RUPVI	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	19-39							
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	36-76							
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	59-83							
PVE4_HPV51	PROBABLE E4 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	63-81							
PVE4_RHPV1	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-43							
PVE1A_HPV11	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 44	19-42							
PVE1A_HPV6C	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1 AND TYPE 2	3-26							
PVE1_BPV1	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	19-41							
PVE1_HPV11	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	11-33							
PVE1_HPV11	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	11-33							
PVE1_HPV42	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	43-65							
PVE1_HPV11	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	11-33							
PVE1_HPV11	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	89-111							
PVE1_HPV1B	PROBABLE E1 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	109-132							
PVE1_RUPV1	PROBABLE E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	23-41							
PVE6_BPV1	E6 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	6-23							
PVE6_CRPVK	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1	133-151							
PVE6_HPV06	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	6-27							
PVE6_HPV2A	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	9-26							
PVE6_HPV11	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	9-26							
PVE6_HPV33	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	9-26							
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	8-27							
PVE6_HPV57	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1	9-26							
PVE6_HPV58	E6 PROTEIN	MICROMYS MINUTUS PAPILLOMAVIRUS	7-33	16-60						
PVE6_MMPV	E6 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	11-28							
PVE7_CRPVK	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	77-93							
PVE7_HPV11	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-87							
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	30-37							
PVE7_HPV6B	E7 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	79-105							
PVE7_RHPV1	E7 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	18-99	201-222						
PVE4_NPVAC	EARLY 94 KD PROTEIN	TRICHOPLUSIA NI GRANULOSIS VIRUS	134-173	237-260	677-696					
PVEF_GVTN	VIRAL ENHANCING FACTOR	BEANE VIRUS	62-86	87-114						
PVENV_BEV	ENVELOPE PROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61)	42-57	484-511						
PVENV_DHV11	ENVELOPE GLYCOPROTEIN PRECURSOR	EQUINE ARTERITIS VIRUS	25-41							
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	LELYSTAD VIRUS	27-47	148-168						
PVENV_LELV	PROBABLE ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1	61-80							
PVENV_MCV1	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2	61-80	306-333						
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	THOGOTO VIRUS	196-211	336-383	473-491					
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	82-103							
PVETM_NPVAC	ECORI-T SITE PROTEIN ETM	VACCINIA VIRUS (STRAIN COPENHAGEN)	280-303							
PVF05_VACCC	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	280-305							
PVF05_VACCP	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	281-306							
PVF05_VACCV	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	280-305							
PVF05_VARV	38 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	176-200							
PVF09_VACCC	PROTEIN F9	VACCINIA VIRUS (STRAIN WR)	176-200							
PVF09_VACCV	PROTEIN F9	VARIOLA VIRUS	176-200							
PVF09_VARV	PROTEIN F9	VACCINIA VIRUS (STRAIN COPENHAGEN)	161-184							
PVF11_VACCC	PROTEIN F11	VARIOLA VIRUS	161-184							
PVF11_VARV	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-48							
PVF13_VACCC	PROTEIN F13									

PCGENE	PLUCTL2IP	All Viruses (No Bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVF1_VACCP	PROTEIN F1)	VACCINIA VIRUS (STRAIN L-IVP)	3-26	---	---	1	---	---	---	---
PVF1J_VARV	PROTEIN F1)	VARIOLA VIRUS	28-51	---	---	---	---	---	---	---
PVF1I_FOWPV	PROTEIN F1)	FOWLPOX VIRUS	297-323	---	---	---	---	---	---	---
PVF1J_FOWPV	PROTEIN F1)	FOWLPOX VIRUS	88-104	---	---	---	---	---	---	---
PVF2J_FOWPV	PROTEIN F2)	CAPRIPOX VIRUS (STRAIN KS-1)	89-111	---	---	---	---	---	---	---
PVF7J_CAPVK	PROTEIN F7	FOWLPOX VIRUS	65-90	---	---	---	---	---	---	---
PVF2I_FOWPV	PROTEIN F2)	CAPRIPOXVIRUS (STRAIN KS-1)	51-76	---	---	---	---	---	---	---
PVF1B_CAPVK	CF1A PROTEIN	ORF VIRUS (STRAIN NZ2)	29-48	---	---	---	---	---	---	---
PVFU5_ORFNZ	10 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR 65-16)	32-54	---	---	---	---	---	---	---
PVFU5_VACCC	14 KD FUSION PROTEIN	EQUINE HERPESVIRUS 1 TYPE 1 (STRAIN AB4P)	169-193	---	---	---	---	---	---	---
PVG01_HSV1B	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1	210-233	317-339	389-416	1	---	---	---	---
PVG01_HSV1I	HYPOTHETICAL GENE 1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	298-318	376-395	---	---	---	---	---	---
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	233-257	315-334	---	---	---	---	---	---
PVG01_VACCV	PROTEIN G1	VARIOLA VIRUS	298-318	376-395	---	---	---	---	---	---
PVG01_VARV	PROTEIN G1	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	38-62	---	---	---	---	---	---	---
PVG01_VZVD	HYPOTHETICAL GENE 1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	30-52	---	---	---	---	---	---	---
PVG02_VACCC	PROTEIN G2	VARIOLA VIRUS	50-73	---	---	---	---	---	---	---
PVG02_VARV	PROTEIN G2	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-33	---	---	---	---	---	---	---
PVG04_VACCC	PROTEIN G4	VARIOLA VIRUS	11-33	---	---	---	---	---	---	---
PVG04_VARV	PROTEIN G4	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-51	---	---	---	---	---	---	---
PVG06_VACCC	PROTEIN G6	VARIOLA VIRUS	31-51	---	---	---	---	---	---	---
PVG06_VARV	PROTEIN G6	ICTALURID HERPESVIRUS 1	134-149	159-185	---	---	---	---	---	---
PVG08_HSV1I	HYPOTHETICAL GENE 8 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	35-54	---	---	---	---	---	---	---
PVG10_HSV1I	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	109-124	335-339	---	---	---	---	---	---
PVG10_HSV5A	HERPESVIRUS SAIMIRI	ICTALURID HERPESVIRUS 1	103-118	156-176	---	---	---	---	---	---
PVG11_HSV1I	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	131-178	376-386	---	---	---	---	---	---
PVG12_HSV5A	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-92	---	---	---	---	---	---	---
PVG13_HSV1I	HYPOTHETICAL GENE 13 PROTEIN	ICTALURID HERPESVIRUS 1	88-112	---	---	---	---	---	---	---
PVG19_HSV1I	HYPOTHETICAL GENE 19 MEMBRANE PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	313-336	---	---	---	---	---	---	---
PVG1L_AMEPV	GIL PROTEIN	SPIROPLASMA VIRUS SPV1-READ B	16-63	659-678	---	---	---	---	---	---
PVG1_SPVIR	CAPSID PROTEIN	ICTALURID HERPESVIRUS 1	100-117	---	---	---	---	---	---	---
PVG21_HSV1I	HYPOTHETICAL GENE 21 PROTEIN	ICTALURID HERPESVIRUS 1	310-333	---	---	---	---	---	---	---
PVG31_HSV1I	HYPOTHETICAL GENE 31 PROTEIN	ICTALURID HERPESVIRUS 1	158-184	---	---	---	---	---	---	---
PVG17_HSV1I	HYPOTHETICAL GENE 17 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	209-226	---	---	---	---	---	---	---
PVG17_HSV5A	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	173-197	491-518	---	---	---	---	---	---
PVG18_HSV1I	HYPOTHETICAL GENE 18 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	14-40	---	---	---	---	---	---	---
PVG18_HSV5A	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	20-42	---	---	---	---	---	---	---
PVG19_HSV1I	HYPOTHETICAL GENE 19 PROTEIN	ICTALURID HERPESVIRUS 1	166-191	---	---	---	---	---	---	---
PVG19_HSV1D	HYPOTHETICAL GENE 30 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	90-109	---	---	---	---	---	---	---
PVG19_VZVD	GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	108-123	344-362	---	---	---	---	---	---
PVG36_HSV5A	POSSIBLE TYROSINE-PROTEIN KINASE	ICTALURID HERPESVIRUS 1	284-299	---	---	---	---	---	---	---
PVG37_HSV1I	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	648-675	976-990	1030-1063	---	---	---	---	---
PVG39_HSV1I	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	14-33	---	---	---	---	---	---	---
PVG40_HSV1I	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1	11-38	62-81	244-260	---	---	---	---	---
PVG41_HSV1I	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1	109-133	137-178	222-245	521-538	---	---	---	---
PVG42_HSV1I	HYPOTHETICAL GENE 42 PROTEIN	ICTALURID HERPESVIRUS 1	134-156	580-607	917-961	1244-1270	---	---	---	---
PVG43_HSV1I	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	71-97	---	---	---	---	---	---	---
PVG46_HSV1I	HYPOTHETICAL GENE 46 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	5-30	38-53	---	---	---	---	---	---
PVG50_HSV5A	PROB TRANSCRIPTION ACTIVATOR EDNF1	ICTALURID HERPESVIRUS 1	29-49	84-102	---	---	---	---	---	---
PVG51_HSV1I	HYP GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	229-251	---	---	---	---	---	---	---
PVG52_HSV1I	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1	22-37	143-158	208-309	---	---	---	---	---
PVG53_HSV1I	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	83-106	---	---	---	---	---	---	---
PVG53_HSV5A	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1	1155-1176	---	---	---	---	---	---	---
PVG56_HSV1I	HYPOTHETICAL GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-146	266-288	293-319	330-346	---	---	---	---
PVG58_HSV5A	GENE 58 PROTEIN	ICTALURID HERPESVIRUS 1	142-161	267-289	---	---	---	---	---	---
PVG59_HSV1I	HYP GENE 59 MEMBRANE PROTEIN	SPIROPLASMA VIRUS 4	42-64	---	---	---	---	---	---	---
PVG5_SPV4	GENE 5 PROTEIN	ICTALURID HERPESVIRUS 1	30-51	53-71	---	---	---	---	---	---
PVG60_HSV1I	HYPOTHETICAL GENE 60 PROTEIN									

PCGENE	P11CT12P	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVG61_HSV1	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1	76-102	1117-136							
PVG63_HSV1	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	238-259	316-363							
PVG64_HSV1	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	420-445								
PVG65_HSV1	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	117-137	155-173	362-378	518-533	1147-1174	1347-1369			
PVG67_HSV1	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	108-122	171-188	318-344	722-745	1005-1029	1072-1091	1315-1341		
PVG6_SPV1R	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-R4A2 B	60-82								
PVG70_HSV1	HYPOTHETICAL GENE 70 PROTEIN	ICTALURID HERPESVIRUS 1	184-209								
PVG71_HSVSA	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	89-105								
PVG72_HSV1	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	445-471	535-561	720-744	1252-1269					
PVG74_HSVSA	G-PROTEIN COUPLED REC HOMOLOG ECRF3	HERPESVIRUS SAIMIRI (STRAIN 11)	124-151								
PVG9_SPV1R	GENE 9 PROTEIN	SPIROPLASMA VIRUS SPV1-R4A2 B	51-72								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1587-1606	1856-1877	2108-2127	2210-2226	2788-2806	2973-2999	3073-3090	3120-3145	3374-3399
PVGH3_HCMVA	GLYCOPROTEIN H301 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	3601-3625								
PVGL1_CVPR8	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004/BRITISH15	157-178	174-193							
PVGL1_CVBF	E1 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	123-139	174-190	264-279	651-674	991-1017	1259-1280			
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	31-47	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	768-794	1053-1071	1115-1134						
PVGL2_CVM44	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	95-111	999-1025	1267-1290	1317-1338					
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	95-111	947-973	1215-1238	1265-1286					
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	95-111	999-1025	1267-1290	1317-1338					
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	95-111	858-884	1126-1149	1176-1197					
PVGL2_CVPFS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	800-816	1038-1064	1274-1297				
PVGL2_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	504-521	800-816	1038-1064	1274-1297			
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_CVPR8	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH1	218-233	376-392	814-840	1050-1073					
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	218-233	376-392	814-840	1050-1073					
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	603-619	1041-1067	1277-1300						
PVGL2_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	196-219	388-607	771-797	1036-1081	1094-1111				
PVGL2_IBVD2	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	195-218	387-606	770-796	1035-1080					
PVGL2_IBVD3	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274) (	196-219	388-607	771-797	1036-1081					
PVGL2_IBVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D1896)	196-219								
PVGL2_IBVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN K88/33)	195-218	387-606	770-796	1035-1080					
PVGL2_IBVU1	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	195-218	378-398	587-606	770-796	1035-1080				
PVGL2_IBVU2	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/123/82)	178-201								
PVGL2_IBVU3	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/142/86)	178-201								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	178-201								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	732-752								
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	535-558	706-732	750-777						
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	536-559	707-733	751-778						
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	83-104								
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	82-103								
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	82-103								
PVGLB_HSV23	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	83-104								
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	79-99								
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAR)	79-99								
PVGLB_HSV6U	GLYCOPROTEIN B (FRAGMENT)	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	63-85								
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	72-92	117-144							
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BIV) (BOVINE MAMMILLITIS	560-578	689-707							
PVGLB_HSVBC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	279-299	745-767							
			672-710								

PCGENE FILE NAME	P1CTL.ZIP PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A) (EHV-1)	736-753								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	675-692								
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	736-753								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	736-753								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	736-753								
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	589-613								
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	483-506	384-402	701-716						
PVGLB_ILTV6	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 632)	256-275	597-621	740-758						
PVGLB_ILTVS	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2)	266-285	607-631	750-768						
PVGLB_ILTVT	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	266-285	607-631	750-768						
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-156	566-589	738-765						
PVGLB_PRVJF	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	200-218								
PVGLB_VZVD	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	522-538								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	3-22	467-493							
PVGLC_HSVIK	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	3-22	467-493							
PVGLC_HSV2:	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	431-458								
PVGLC_HSV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN JJ)	476-459								
PVGLC_HSVBC	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	471-494								
PVGLC_HSVEA	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	444-459								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KENTUCKY D)	427-442								
PVGLC_HSVMB	SECRETORY GLYCOPROTEIN GP137-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN HC-1)	399-421								
PVGLC_HSVMD	SECRETORY GLYCOPROTEIN GP137-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	399-421								
PVGLC_HSVMO	SECRETORY GLYCOPROTEIN GP137-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	398-420								
PVGLC_HSVMM	SECRETORY GLYCOPROTEIN GP137-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	399-421								
PVGLC_PRVB:	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	180-197	446-472							
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	431-449								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	431-449								
PVGLD_HSV11	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17), AND (TYPE 1 / STRAIN	279-94								
PVGLD_HSV2	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	279-94								
PVGLE_HSV11	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	104-129	413-437							
PVGLE_VZVD	GLYCOPROTEIN E PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	469-493								
PVGLF_BJSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	265-221	265-287	482-504						
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COFENHAGEN)	265-221	265-280	484-506						
PVGLF_BJSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	265-221	265-280	484-506						
PVGLF_CDVD	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	336-361	398-414	562-589						
PVGLF_HSVVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	265-221	265-280	484-506						
PVGLF_HSVVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	265-221	265-280	484-506						
PVGLF_HSVVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LO	265-221	265-280	484-506						
PVGLF_HSVVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	265-221	265-280	484-506						
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)and (STRAIN HALLE)	224-245	286-302	451-477						
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	227-248	289-305	454-480						
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-245	286-302	451-477						
PVGLF_MUMP1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-20	276-292	446-467						
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	276-292	446-467							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	276-292	446-467							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-20	276-292	446-467						
PVGLF_NDVA:	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	273-289								
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	273-289								
PVGLF_NDVH3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HERTS/33)	273-289								
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	273-289								
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LASOTA)	273-289								
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	273-289								
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	273-289								
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	273-289								
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	273-289								
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	273-289								
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	269-285	305-326	367-383	531-558					

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage!)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
PVGLF_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	436-477								
PVGLF_PIIH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	450-471								
PVGLF_PIIHO	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	450-471								
PVGLF_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIBA)	450-471								
PVGLF_PIIB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	405-426	453-474							
PVGLF_PIIH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	2-20	383-310	455-474						
PVGLF_RUNDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	220-241	282-298	447-473						
PVGLF_RUNDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	220-241	282-298	447-473						
PVGLF_SENDS	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-481								
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-481								
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-481								
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-481								
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-481								
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	453-474								
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	401-425	446-467							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	175-191	453-474							
PVGLO_DNV	SPIKE GLYCOPROTEIN PRECURSOR	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	77-99								
PVGLO_RABVE	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN ERA)	454-474								
PVGLO_RABVH	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN HEP-FLURY)	372-391	454-474							
PVGLO_RABVP	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN PV)	454-474								
PVGLO_RABV3	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN SAD B19)	454-474								
PVGLO_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	454-474								
PVGLO_TRTV	MAJOR SURFACE GLYCOPROTEIN G	TURKEY RHINOTRACHEITIS VIRUS	199-216								
PVGLO_VHSV0	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	406-428								
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	211-237	365-382	574-598	691-712?					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	210-236	364-381	573-597	690-711					
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	245-262	443-467	803-827						
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	245-262	443-467	803-827						
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	314-332								
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	304-325	814-839							
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)and (ISOLATE HVS25A)	297-318	807-832							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	434-479	658-679							
PVGLH_HCMVS	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	670-690								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-180								
PVGLI_HSV11	GLYCOPROTEIN I	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	43-60								
PVGLI_HSVEB	GLYCOPROTEIN I PRECURSOR	EQUINE HERPESVIRUS TYPE 1	44-63								
PVGLI_VZVD	GLYCOPROTEIN I	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	278-297								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	117-136	197-222							
PVGLM_BUNLJ	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	31-55	81-98	190-211	1323-1345	1387-1410				
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	31-55	81-98	190-211	1323-1345	1387-1410				
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	193-218	1379-1404							
PVGLM_DUOBV	M POLYPROTEIN PRECURSOR	DUOBE VIRUS									
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	335-371	692-717	900-915	999-1019					
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	499-515	694-718	1000-1020						
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	499-515	694-719	1001-1021						
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	499-515	694-719	1001-1021						
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	18-44	269-293	348-367	531-551	815-841				
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	132-171								
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	743-765	997-1016	1375-1302						
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	155-174	509-525	712-729						
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	155-174	509-525	712-729	1092-1117					
PVGLM_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS	53-80	344-368	830-856						
PVGLM_RVFVZ	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	53-80	344-368	830-856	1136-1176					
PVGLM_SEOUB	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN B0-39)	335-371	692-717	900-915	999-1019					
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	335-371	693-718	901-916	1000-1020					
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11) (SAPPORO RAT VIRUS)	335-371	692-717	900-915	999-1019					
PVGLM_UUK	M POLYPROTEIN PRECURSOR	UUKUNIEMI VIRUS	361-385	655-674	816-842	925-953	966-989				

PCGENE FILENAME	PIR1;1;ZIP PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	410-452	869-885	1099-1124	1346-1368					
PVGLX_HSVEB	GLYCOPROTEIN X PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)									
PVGLX_HSVEK	GLYCOPROTEIN GX PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)									
PVGLX_HSVEL	GLYCOPROTEIN GX	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)									
PVGLX_PRVRJ	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN RICE)	149-176								
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	12-38								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	12-38	237-258	426-448						
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	12-35	238-259	427-449						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	12-35								
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	12-35	89-108							
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	12-35	425-447							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-38	441-466							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-38								
PVGLY_TACV3	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V3)	12-38								
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	12-38								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-38								
PVGNB_CMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	141-161	569-594	757-783	1110-1135	1163-1184				
PVGNM_CMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS	311-335	741-764							
PVGP2_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	657-681								
PVGPJ_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	854-878								
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-88								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	34-51	537-561	653-675						
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	538-562	607-627							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	538-562	607-627							
PVH01_VACCC	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-92	105-121							
PVH01_VACCV	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN WR)	76-92	105-121							
PVH01_VARV	PROTEIN-TYROSINE PHOSPHATASE	VARIOLA VIRUS	76-92	105-121							
PVH07_VACCV	LATE PROTEIN H7	VACCINIA VIRUS (STRAIN WR)	70-97								
PVH07_VARV	LATE PROTEIN H7	VARIOLA VIRUS	70-97								
PVHEL_FOMV	PROBABLE HELICASE	FOXTAIL MOSAIC VIRUS	182-205								
PVHEL_PMV	PROBABLE HELICASE	PAPAYA MOSAIC POTEXVIRUS	153-168								
PVI01_VACCC	PROTEIN 11	VACCINIA VIRUS (STRAIN COPENHAGEN)	120-135								
PVI01_VARV	PROTEIN 11	VARIOLA VIRUS	120-135								
PVI03_VACCC	PROTEIN 13	VACCINIA VIRUS (STRAIN COPENHAGEN)	194-220								
PVI03_VACCV	PROTEIN 13	VACCINIA VIRUS (STRAIN WR)	194-220								
PVI03_VARV	PROTEIN 13	VARIOLA VIRUS	194-220								
PVI06_VACCV	PROTEIN 16	VACCINIA VIRUS (STRAIN WR)	106-128	133-155							
PVI06_VARV	PROTEIN 16	VARIOLA VIRUS	106-128	133-155							
PVI07_VACCC	PROTEIN 17	VACCINIA VIRUS (STRAIN COPENHAGEN)	13-34	344-367							
PVI07_VACCV	PROTEIN 17	VACCINIA VIRUS (STRAIN WR)	13-34	344-367							
PVI07_VARV	PROTEIN 17	VARIOLA VIRUS	13-34	344-367							
PVI08_VACCC	PUTATIVE RNA HELICASE 18	VACCINIA VIRUS (STRAIN COPENHAGEN)	196-212	418-438							
PVI08_VACCV	PUTATIVE RNA HELICASE 18	VACCINIA VIRUS (STRAIN WR)	196-212	418-438							
PVI08_VARV	PUTATIVE RNA HELICASE 18	VARIOLA VIRUS	196-212	418-438							
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-100	333-350							
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	77-100	333-350							
PVIE2_HCMVA	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	14-32	389-406							
PVIE2_HCMVT	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32	388-405							
PVIE3_MCMVS	IMMEDIATE-EARLY PROTEIN 3	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	251-272								
PVIE3_HCMVT	30 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32								
PVIE0_HSV8A	IMMEDIATE-EARLY PROTEIN IE-G	HERPESVIRUS SAIMIRI (STRAIN 11)	65-80								
PVIEN_NPVAC	IMMEDIATE-EARLY REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	100-116	273-290							
PVIM1_EBV	PROB INTEGRAL MEMBRANE PROTEIN BBRF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	75-100	125-152	203-222						
PVIM2_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-89	190-217							
PVIM2_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-110	250-270							
PVIM2_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	24-49	91-120	145-172	247-263	301-321	332-358			
PVIM2_HSV8A	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-101	313-331							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 3	AREA 1	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	21-47	194-181	230-252					
PVIMP_VZVD	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	89-110							
PVI01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-110							
PVI01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	89-110							
PVI01_VARV	PROTEIN J1	VARIOLA VIRUS	87-113	208-234	319-337					
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-113	208-234	319-337					
PVK04_VACCV	PROTEIN K4 1	VACCINIA VIRUS (STRAIN WR)	106-133							
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-61							
PVL02_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-61							
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-61							
PVL02_VARV	PROTEIN L2	VARIOLA VIRUS	148-164	186-208	292-315					
PVL03_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	148-164	186-208	292-315					
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	147-163	185-207	291-314					
PVL03_VARV	PROTEIN L3	VARIOLA VIRUS	16-39							
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	16-39							
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-39							
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	299-317							
PVL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	28-55							
PVL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	38-63							
PVL1_REOVD	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	327-346	351-366	752-774					
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	234-270							
PVL2_HPV11	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	32-58							
PVL2_HPV13	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	33-59							
PVL2_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	34-60							
PVL2_HPV18	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	33-59							
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	213-228							
PVL2_HPV2A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	88-114							
PVL2_HPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	34-60	443-462						
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-59	99-114						
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	34-60							
PVL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	39-58	414-436						
PVL2_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	33-59	344-370						
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	230-265							
PVL2_HPV57	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	32-58							
PVL2_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-59	99-114						
PVL2_HPV6B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	33-59							
PVL2_PAPVE	PROBABLE L2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	30-56							
PVL2_RHPV1	PROBABLE L2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	45-71							
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	6-28							
PVL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING	714-737							
PVL3_REOVJ	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN DJ/JONES)	714-737	1213-1236						
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	714-737							
PVL3&_IKVI	L3& PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-170	196-220	686-711	843-861				
PVM01_VACCC	PROTEIN M1	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-159	177-195	281-302					
PVM01_VACCV	PROTEIN M1	VACCINIA VIRUS (STRAIN WR)	80-108	126-144	230-251					
PVM01_VARV	PROTEIN M1	VARIOLA VIRUS	81-106	124-142	228-249					
PVM1_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING)	141-168	227-245	280-304	324-347	414-436	454-477		
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	141-168	227-245	280-304	414-436	454-477			
PVM21_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192							
PVM23_REOVD	MAJOR VIRION STRUCT PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192							
PVM3_REOVJ	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN DJ/JONES)	168-192							
PVM3_REOVL	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-192							
PVM3_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	304-326	521-540						
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	37-62							
PVMAT_CDVO	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	148-165	283-309						
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	44-62	139-160						
PVMAT_LPMV	MATRIX PROTEIN	LA PIEDAD-MICHOACAN-MEXICO VIRUS	311-338							
PVMAT_MEASE	MATRIX PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	283-309							

PCGENE	PIRCLZIP	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVMAT_MEASH	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HALLE)	283-309							
PVMAT_MEASI	MATRIX PROTEIN	MEASLES VIRUS (STRAIN IP-J-CA)	87-111							
PVMAT_MEASU	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HU2)	283-309							
PVMAT_MUMP1	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	191-207	227-250	310-330					
PVMAT_MUMPS	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL)	191-207	227-250	310-330					
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	135-151	190-208	309-329					
PVMAT_NDVB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	135-151	190-208	309-329					
PVMAT_PIHC	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	195-217							
PVMAT_PIHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA) (PIV-2)	132-154	189-205	308-328					
PVMAT_PIHA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	112-132							
PVMAT_PIHB	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	112-132							
PVMAT_RUNDK	MATRIX PROTEIN	RINDERPEST VIRUS (STRAIN KABETE O)	200-221	239-260	283-309					
PVMAT_SENDF	MATRIX PROTEIN	SENDAI VIRUS (STRAIN FUSHIMI)	195-217							
PVMAT_SENGH	MATRIX PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	195-217							
PVMAT_SENDZ	MATRIX PROTEIN	SENDAI VIRUS (STRAIN Z)	195-217							
PVMAT_SSPVB	MATRIX PROTEIN	SUBACUTE SCLEROSING PANENCEPHALITIS VIRUS (STRAIN BIKEN)	283-309	314-338						
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	132-154	189-205	308-328					
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3)	98-114	132-148	308-333					
PVMAT_SVCV	MATRIX PROTEIN	SPRING VIREMIA OF CARP VIRUS (RHABDOVIRUS CARPIA)	141-167							
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS	122-143							
PVMEI_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	9-36	137-161	171-190					
PVMEI_CVH22	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN 229E)	136-155							
PVMEI_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	9-36	64-85	137-161					
PVMEI_CVMA5	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	10-37							
PVMEI_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	10-37							
PVMEI_CVPFS	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	174-193							
PVMEI_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAT	169-193	174-193						
PVMEI_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	174-193							
PVMEI_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	9-36	137-161	171-190					
PVMEI_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	74-98							
PVMEI_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	74-101							
PVMEI_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42)	74-101							
PVMEI_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	74-98							
PVMEM_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	131-157	178-203						
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	118-134	147-164	183-201					
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	118-134	147-164	183-201					
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN B0C)	118-134	147-164	183-201					
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	118-134	147-164	183-201					
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	118-134	147-164	183-201					
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	118-134	147-164	183-201					
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	293-318							
PVMP_FMVD	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	115-131	180-198						
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-147	273-299						
PVMSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	201-228	269-295						
PVMSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	194-221	268-294						
PVMSA_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	157-184	231-257						
PVMSA_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S11)	194-221	269-295						
PVMSA_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	209-236	271-295	310-395					
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	236-262	293-320						
PVMSA_HPBV0	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	11-28	70-96						
PVMSA_HPBV2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	185-202	244-270						
PVMSA_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	185-202	244-270						
PVMSA_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-270							
PVMSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	174-191	233-259						
PVMSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	11-28	70-96						
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-259							
PVMSA_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	174-191	233-259						

PCGENE	PIRCLUSTER	All Viruses (No Bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA 3	AREA 6	AREA 7	AREA 8	AREA 9
PVM5A_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE	174-191	233-259						
PVM5A_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADR / STRAIN NC-1)	11-28	70-96						
PVM5A_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	174-191	233-259						
PVM5A_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PEDW294)	185-202	244-270						
PVM5A_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	185-202	244-270						
PVM5A_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	11-28	70-96						
PVM5A_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	174-191	233-259						
PVM5A_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	174-191	233-259						
PVM5A_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	174-191	233-259						
PVM5A_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-234	269-293	338-393					
PVM5A_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	212-239	274-298	383-398					
PVM5A_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-239	274-298	383-398					
PVM5A_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-239	274-298	383-398					
PVM5A_WHVU1	PROB MAJOR SURFACE ANTIGEN PREC	WOODCHUCK HEPATITIS VIRUS U (INFECTIOUS CLONE)	212-239	274-298	383-398					
PVM5A_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW522)	125-149	234-249						
PVMT1_IAANN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	23-46							
PVMT1_IABAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	23-46							
PVMT1_IAFOW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	23-46							
PVMT1_IAFPR	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	23-46							
PVMT1_IAFPW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	23-46							
PVMT1_IALE1	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	23-46							
PVMT1_IALE2	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	23-46							
PVMT1_IAMAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	23-46							
PVMT1_IAPUE	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	23-46							
PVMT1_IASIN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	23-46							
PVMT1_IAUDO	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	23-46							
PVMT2_IAWIL	MATRIX (M2) PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	226-241							
PVMT9_MYXVL	MT-9 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	334-351							
PVN34_ROTBS	NONSTRUCTURAL PROTEIN NS34	POTATO VIRUS S (STRAIN PERUVIAN)	21-36							
PVNBP_PVSP	10 7 KD PROTEIN	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	13-39							
PVNB_INBBE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	13-39							
PVNB_INBHK	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	13-39							
PVNB_INBLE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	13-39							
PVNB_INBLN	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	13-39							
PVNB_INBMD	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/89)	13-39							
PVNB_INBMF	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	13-39							
PVNB_INBOR	NB GLYCOPROTEIN	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	81-96	169-190						
PVNCS_ADVO	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002) (AEDES DENS	673-690							
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	575-597							
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	140-165							
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	256-272							
PVNS1_AHSV4	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	31-50	114-137	167-192					
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	31-50	114-137	167-192					
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	19-38							
PVNS1_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	31-50	114-137	167-192					
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-50	167-192						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	28-47	164-189						
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	31-50	167-192						
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	28-47	164-189						
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	28-47	164-189						
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	31-50	114-137	167-192					
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND(STRAIN A/	31-50	114-137	167-192					
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	31-50	167-192						
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	31-50	114-137	167-192					
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	31-50	114-137	167-192					
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	31-50	167-192						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	31-50							

PCGENE	TITLE	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	31-50	167-192							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	31-50	167-192							
PVNS1_IAMAD	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MYNAH/HANEDA-THA/76)	28-47	164-189							
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	167-192								
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	31-50	181-191							
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	31-50	167-192							
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/359/79)	31-50	167-192							
PVNS1_IAPIJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/359/79)	31-50	114-137	167-192						
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	31-50	167-192							
PVNS1_IATK9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GILLIT/1492-B/	31-50	167-192							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	31-50	167-192							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	31-50								
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	28-47	164-189							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	31-50	167-192							
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DONN/307/72)	31-50	114-137	167-192						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	31-50	114-137	167-192						
PVNS1_IAZ11	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	31-50	167-192							
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-248								
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-248								
PVNS2_BTV10	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV17	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV1S	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	145-161								
PVNS2_BTV1X	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	145-161								
PVNS2_EHDV2	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AL	145-161								
PVNS2_IAPUE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-28								
PVNS2_IATRS	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	56-80								
PVNS3_PVM	NONSTRUCTURAL PROTEIN 3	PNEUMONIA VIRUS OF MICE	52-68								
PVNS3_CVPF3	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	177-201								
PVNS3_CVPPU	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	98-122								
PVNS3_CVPRM	NONSTRUCTURAL PROTEIN 3-1	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	177-201								
PVNS3_RSV	NONSTRUCTURAL PROTEIN NS3	RICE STRIPE VIRUS	16-40								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	84-100								
PVNS4_CVMS	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-38								
PVNS4_CVPF3	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	4-31								
PVNS4_MSTV	NONSTRUCTURAL PROTEIN NS4	MAIZE STRIPE VIRUS	41-56								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	41-56	60-82	152-167						
PVNS7_CVFE3	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	59-84								
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	59-84								
PVNSC_PIIHB	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	76-92								
PVNSC_PIIHC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	76-92								
PVNSC_PIIHD	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	76-92	179-197							
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	76-92								
PVNST_CVBQ	22 KD NONSTRUCTURAL PROTEIN	BOVINE CORONAVIRUS (STRAIN QUEBEC)	88-109								
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-248								
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-248								
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-248								
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-248								
PVNST_PTPV	NONSTRUCTURAL PROTEIN NS-3	PUNTA TORO PHLEBOVIRUS	48-63								
PVNST_SFSV	NONSTRUCTURAL PROTEIN NS-3	SANDFLY FEVER SICILIAN VIRUS	16-34								
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-3	UUKUNIEMI VIRUS	52-73	89-104							
PVRUA_PRVRA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	736-777	1363-1383							
PVNUC_DHVII	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61)	123-139	297-324							
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	159-176								
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	173-197	266-287							
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	173-197								
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	173-197								

PCGENE	P1ICTL2IP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	173-197								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	173-197								
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	173-197								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	173-197								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80	173-197								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	173-197								
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	173-197								
PVNUC_IADEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	173-197								
PVNUC_IADEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	173-197								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/77/75)	173-197								
PVNUC_IADMJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/918/74)	173-197								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	173-197								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	173-197								
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/60)	173-197								
PVNUC_IAEN3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	173-197								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	173-197								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	173-197								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTC	173-197								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	173-197								
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	173-197								
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	173-197								
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	173-197								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	173-197								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	173-197								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	173-197								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	173-197								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	173-197								
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HUCK0/40)	173-197								
PVNUC_IAHJI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/ILLIN/1/89)	173-197								
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	173-197								
PVNUC_IAHM3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	173-197								
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	173-197								
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	173-197								
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	173-197								
PVNUC_IAHTB	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	173-197								
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	173-197								
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	173-197								
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	173-197								
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	173-197								
PVNUC_IAMON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	173-197								
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	173-197								
PVNUC_IAOH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/81)	173-197								
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	173-197								
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	173-197								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/	173-197								
PVNUC_IASEA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	173-197								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	173-197								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	173-197								
PVNUC_IATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	173-197								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	173-197								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	173-197								
PVNUC_IATR3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	173-197								
PVNUC_IATR7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1/671)	173-197								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	173-197								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	173-197								
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	173-197								
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	173-197								

PEGENE	FIUCTLZIP	All Viruses (No Bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	173-197								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/1976)	173-197								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	173-197								
PVNUC_IAZ39	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	173-197								
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/69)	173-197								
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	173-197								
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/81)	173-197								
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	173-197								
PVNUC_IAZHH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	173-197								
PVNUC_IAZHJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/12/82)	173-197								
PVNUC_IAZII	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	173-197								
PVNUC_IAZIJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	173-197								
PVNUC_IAZJJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	173-197								
PVNUC_IAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/39/89)	173-197								
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	173-197								
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/AIA/75/4)	173-197								
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	173-197								
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/93)	173-197								
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	173-197								
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	173-197								
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	234-258								
PVNUC_INBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	234-258								
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	234-258								
PVNUC_INBSI	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	234-258								
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-39	141-158							
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-39	141-158							
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	189-204	242-262	336-358						
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	189-204	242-262	336-358						
PVOR1_FOAV	132 KD PROTEIN	FOWLPOX VIRUS	846-865								
PVOR1_NMV	146 KD PROTEIN	NARCISSUS MOSAIC VIRUS	409-424	990-1010							
PVOR1_PVMA	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	87-104	986-1009	1231-1270	1893-1909					
PVOR1_PVSP	223 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	279-295								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	128-153	234-256	306-322	1010-1030					
PVOR1_PVXCP	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	128-153	234-256	306-322	385-404	1010-1030				
PVOR1_PVXOO	165 KD PROTEIN	POTATO VIRUS X (STRAIN XS)	128-153	234-256	306-322	1010-1030					
PVOR1_SMYEA	150 KD PROTEIN	OS STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	121-146	155-175							
PVOR1_WCMVM	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	121-146								
PVOR1_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	121-146	408-430							
PVP01_HSV5A	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	424-446	462-486	551-575	579-595	1051-1072				
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-26	42-59							
PVP10_NPVOP	P10 PROTEIN	OROTYA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	4-31								
PVP10_NPV5E	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	35-58								
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS	31-49	52-77	105-129	195-214	260-283	504-528			
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	90-107	265-291							
PVP14_EBV	PROBABLE MEMBRANE ANTIGEN P140	EPSTEIN-BARR VIRUS (STRAIN B95-8)	694-715	857-879	1124-1145						
PVP19_EBV	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	EPSTEIN-BARR VIRUS (STRAIN B95-8)		346-364							
PVP19_HCMVA	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-101	122-149	200-216						
PVP19_HSV5A	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HERPESVIRUS SAIMIRI (STRAIN 11)	238-265								
PVP19_VZVD	CAPSID ASSEMBLY AND DNA MATUR PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	5-31								
PVP1_SSV1	STRUCTURAL PROTEIN VP1 PRECURSOR	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	8-35								
PVP21_AMCV	CORE PROTEIN P21	ARTICHOKE MOTTLED CRINKLE VIRUS	37-63								
PVP21_CMV	CORE PROTEIN P21	CUCUMBER NECROSIS VIRUS	40-65								
PVP21_CRV	CORE PROTEIN P21	CYMBIDIUM RINGSPOT VIRUS	40-63								
PVP21_TBSVC	CORE PROTEIN P21	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	40-63								
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-165	187-202	261-282						
PVP23_HSV1I	CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	197-220								
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	206-232								

PCGENE FILE NAME	P1JCTL2IP PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-132								
PVP26_NPVAC	P26 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	12-31	58-76	117-141						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	868-891	974-994							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	361-381	399-424	564-586	829-849					
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	361-381	399-424	829-849						
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	362-382	420-438	617-632	657-676					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	361-381								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE AUSTRALIA)	420-438	654-681							
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-31	117-140	420-438	654-681					
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	153-168	229-252							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	301-317	334-360	522-543	673-693	764-789				
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	301-317	334-360	523-544	765-790					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	309-325	342-363	512-533	674-700	774-799				
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	51-75	303-319	408-425	514-533	665-691				
PVP2_ROTS1	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	34-57	219-240	302-318	335-360	523-544	674-700	765-790		
PVP30_MABVP	MINOR NUCLEOPROTEIN VP30	MARBURG VIRUS (STRAIN MUSOKE)	50-75								
PVP33_ASFB1	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	174-197								
PVP33_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	233-256								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	49-75	78-104							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	49-75	78-104							
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-304								
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-304								
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-305								
PVP38_HSVMO	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	255-270								
PVP38_HSVMN	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD11/75C/R2)	255-270								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	296-311								
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	107-134	214-240	295-316						
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4/STRAIN VACCINE)	65-85	126-147	215-230	845-862					
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	123-144	212-227							
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	123-144	212-227							
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	123-144	212-227							
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	121-142	671-695							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2/STRAIN AUS	121-142	675-695							
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	89-108	340-360	367-393	690-717	742-768	748-768	960-975		
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	403-429								
PVP3_ROTS1	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	401-425	426-444	512-536	796-822					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	429-454								
PVP40_HSV11	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	141-168	472-491							
PVP40_HSVEB	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	59-87	95-119	483-504						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	342-368								
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	506-528								
PVP40_MABVM	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN MUSOKE)	95-110								
PVP40_MABVP	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN POPP)	95-110								
PVP40_NPVBM	STRUCTURAL GLYCOPROTEIN P40	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	223-242	236-272							
PVP40_VZVD	CAPSID PROTEIN VP24	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	47-64								
PVP41_NPVAC	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	239-248	263-278							
PVP41_ROTS1	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	483-503								
PVP42_ROTS1	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	395-411	483-508							
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	14-38								
PVP48_NPVOP	P48 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	136-157								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	273-288								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	331-358								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	331-358								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	331-358								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	174-193	233-249	545-561						
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	174-193	233-249	535-551						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	174-193	233-249	535-551						

PCGENE	PICTCLIP	All Viruses (No Bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	174-193	233-249	535-551					
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	483-508							
PVP4_RDV	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS	386-407	493-514	626-645					
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	483-508							
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	483-508							
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	483-508							
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	226-250	483-508						
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	181-207	234-249	482-507					
PVP4_ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	181-207	234-249	482-507					
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	483-508							
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	181-207	234-249	482-507					
PVP4_ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	483-508	524-548						
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	76-91	181-207	234-249	482-507				
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	181-207	234-249	482-507					
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	181-207	234-249	482-507					
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	181-208	235-250	483-508					
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	181-207	234-249	482-507					
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	181-207	234-249	482-507					
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	181-207	482-507						
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	181-207	482-507						
PVP4_ROTP3	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN OSU)	235-250	483-508						
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	487-512							
PVP4_ROTPO	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	234-249	482-507						
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	235-250	483-508						
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	483-508							
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	483-508							
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	395-411	483-508						
PVP4_SBMV	P4 PROTEIN	SOUTHERN BEAN MOSAIC VIRUS	90-114							
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	192-215	416-438	498-519	564-591				
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	295-317	326-345	494-517					
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	295-317	326-345	494-517					
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	295-317	494-517						
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	87-102	295-317						
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-317							
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-317							
PVP5_RDV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS	265-284	622-639	690-715					
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	9-27	232-249	261-276					
PVP61_NPVAC	61 KD P PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	321-337	438-462						
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	5-23	237-272						
PVP63_MDV	PROB NONSTRUCTURAL 363 KD PROTEIN	MAIZE ROUGH DWARF VIRUS	130-146							
PVP64_NPVOP	MAJOR ENV GLYCOPROTEIN PREC	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	81-99	233-252	286-313					
PVP67_NPVAC	MAJOR ENV GLYCOPROTEIN PREC	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	84-102	238-255						
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS	155-172							
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	5-23	228-245	257-272					
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	5-23	228-245	257-272					
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	5-23	228-245	257-272					
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	9-27	233-249	261-276					
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	204-221	233-248						
PVP6_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS	374-397							
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ)	374-397							
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	354-375							
PVP75_HSV5A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	117-147							
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	374-391	405-420	678-704					
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	197-222							
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	205-222	301-323						
PVP7_RDV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS	400-416							
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	262-285							

PCGENE	FIJCTLZIP	All Viruses (No Bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 7	AREA 8	AREA 9
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	98-123	638-660						
PVP87_NPVOP	CAPSID PROTEIN P87	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	571-591							
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-120							
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-120							
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-120							
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-120							
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-120							
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-120							
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-120							
PVP8_RDV	OUTER CAPSID PROTEIN P8 (	RICE DWARF VIRUS	374-400							
PVP8_RGDV	OUTER CAPSID PROTEIN P8	RICE GALL DWARF VIRUS	177-202	216-242	398-425					
PVP8_VACCC	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-242							
PVP8_VACCV	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	225-242							
PVP8_VARV	STRUCTURAL PROTEIN VP8 PRECURSOR	VARIOLA VIRUS	225-242							
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	111-129	214-241	251-271	379-405				
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	51-72							
PVP9_RGDV	NONSTRUCTURAL PROTEIN S9	RICE GALL DWARF VIRUS	151-175							
PVPHE_NPVAC	39 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	145-166	225-245						
PVPHE_NPVOP	33 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	122-144							
PVPRT_ADE12	ENDOPROTEASE	HUMAN ADENOVIRUS TYPE 12	161-181							
PVPRT_MMTVB	PROTEASE	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	42-63							
PVPRT_MPMV	PROTEASE	SIMIAN MASON-PFIZER VIRUS	80-99							
PVPRT_SMRVH	PROTEASE	SQUIRREL MONKEY RETROVIRUS	236-271							
PVPRT_SRV1	PROTEASE	SIMIAN RETROVIRUS SRV-1	80-99							
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BITIO ISOLATE IIXIII)	3-27							
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	4-27							
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	3-28							
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	3-27							
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	3-26							
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	4-27							
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	3-28							
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-27							
PVPU_HV1MN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	3-20							
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	3-28							
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV2 ISOLATE)	3-27							
PVPU_HV1SF	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	3-28							
PVPU_HV1SC	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	3-28							
PVPU_HV1Z2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	3-28							
PVPU_JSRV	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET	24-45							
PVPX_HV2BE	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	10-32							
PVPX_HV2CA	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	10-32							
PVPX_HV2D1	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	10-32							
PVPX_HV2D2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9-31							
PVPX_HV2GI	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	10-32							
PVPX_HV2NZ	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	10-32							
PVPX_HV2RO	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	10-32							
PVPX_HV2SB	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	10-32							
PVPX_HV2ST	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	10-32							
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	145-165							
PVPX_SIVAJ	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRJ-1) (S	66-84							
PVPX_SIVMI	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE) (SIV-MAC)	10-32							
PVPX_SIVMK	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	10-32							
PVPX_SIVML	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	10-32							
PVPX_SIVS4	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (FDI6/SM14 ISOLATE) (SOOTY M	10-32							
PVPX_SIVSP	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE) (SOOTY MA	10-32							
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-312	904-929						
PVS01_ROTBR	NONSTRUCTURAL PROTEIN NCVP2	BOVINE ROTA VIRUS (STRAIN RF)	140-157	461-487						

PEGENE	PEPTIDE	All Viruses (No Bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA M	AREA 3	AREA 4	AREA 2	AREA 1	AREA 9
PV505_ROTHI	NONSTRUCTURAL PROTEIN NCVP2	HUMAN ROTAVIRUS (STRAIN IGV-80-3)	140-157	428-450	457-471						
PV505_ROTPC	NONSTRUCTURAL PROTEIN N535	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	88-112								
PV505_ROTSI	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	399-414								
PV506_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	202-225								
PV506_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-85								
PV506_ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	202-225								
PV506_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	202-225								
PV506_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	202-225								
PV506_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	22-40								
PV506_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	22-40								
PV506_ROTHI	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	202-225								
PV506_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-85								
PV506_ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	202-225								
PV506_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	202-225								
PV506_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-85	314-340							
PV506_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	202-225								
PV507_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	131-155								
PV508_ROTPC	GLYCOPROTEIN VP7 PRECURSOR	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	117-136								
PV508_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-293								
PV509_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	131-155								
PV509_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	131-155								
PV509_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	131-155								
PV509_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK7)	131-155								
PV509_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	131-155								
PV509_ROTC7	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	134-158								
PV509_ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	131-155								
PV509_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	205-232								
PV509_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	131-155	197-212							
PV509_ROTHA	GLYCOPROTEIN VP7 (	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	197-212								
PV509_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	197-212								
PV509_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	197-212								
PV509_ROTHL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	131-155	197-212							
PV509_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	131-155	197-212							
PV509_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	131-155	197-212							
PV509_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	131-155								
PV509_ROTHR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	131-155								
PV509_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	197-212								
PV509_ROTHV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	197-212								
PV509_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	131-155	197-212							
PV509_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN OSU)	131-155	197-212							
PV509_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN TFR-41)	131-155								
PV509_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	197-212								
PV509_ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BMI-1)	197-212								
PV509_ROTRH	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	131-155								
PV509_ROTSI	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	131-155								
PV511_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	136-153								
PV5H_HRSVA	SMALL HYDROPHOBIC PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	16-41								
PV5H_MUMP1	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL)	7-29								
PV5H_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2 & 6)	7-29								
PV5H_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	7-29								
PV5H_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	10-29								
PV5H_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	7-29								
PV5H_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	7-29								
PV5H_MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TERYL-LYNN)	7-29								
PV5H_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	7-29								
PV5H_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	6-29								
PV5H_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	10-29								

PCGENE	P:1CTLZIP	All Viruses (No Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	7-29							
PVSH_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAJASHI)	10-29							
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	10-29							
PVSJ_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-136							
PVSJ3_REOVD	SIGMA 3 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	132-170							
PVSJ3_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN D3/JONES)	132-170							
PVSJ3_REOVL	SIGMA 3 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	132-170							
PVSJS_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	79-101							
PVST2_HEVBU	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA)	292-311							
PVST2_HEVME	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO)	292-311							
PVST2_HEVMY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR)	292-311							
PVST2_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN)	292-311							
PVST2_HEVRJ	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RJIESUS)	160-179							
PVT2_MYXVL	TUMOR NECROSIS FACTOR SOL RECEPTOR PREC	MYXOMA VIRUS (STRAIN LAUSANNE)	261-283							
PVT2_SFVKA	TUMOR NECROSIS FACTOR SOL RECEPTOR PREC	SHOPE FIBROMA VIRUS (STRAIN KASZA)	270-289							
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	116-138							
PVT4_SFVKA	T4 PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	123-148	166-192	227-250					
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	117-139							
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	409-430							
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	363-380	673-688						
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	260-278							
PVTER_HSVEB	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-381							
PVTER_HSVTI	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	309-333	736-781						
PVTER_HSVSA	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	218-241							
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	372-389							
PX_IDPBOS	PROTEIN X	GROUND SQUIRREL HEPATITIS VIRUS	68-85							
PX_WHV1	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 1	68-85							
PX_WHV19	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 19	68-85							
PX_WHV7	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 7	68-85							
PX_WHV8	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8	68-85							
PX_WHV8I	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	68-85							
PX_WHVW6	PROTEIN X	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS2)	68-85							
PY104_ADE07	HYPOTHETICAL 104 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	35-53							
PY108_SSV1	HYPOTHETICAL 108 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	66-90							
PY10K_MSV5	HYPOTHETICAL 109 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	24-47							
PY118_SSV1	HYPOTHETICAL 118 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	42-59							
PY11K_PASV	HYPOTHETICAL 119 KD PROTEIN	PANICUM STREAK VIRUS	29-52							
PY12K_BNYVO	RNA-3 HYPOTHETICAL 116 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE G1)	13-42							
PY13K_CMVSI	HYPOTHETICAL 124 KD PROTEIN	CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	8-30							
PY137_ADE02	HYPOTHETICAL PROTEIN B-137	HUMAN ADENOVIRUS TYPE 2	28-50							
PY13K_CLVK	HYPOTHETICAL 131 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-55							
PY13K_CLVN	HYPOTHETICAL 131 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-53							
PY13K_TYLCM	HYPOTHETICAL 133 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	10-27							
PY13K_TYLCV	HYPOTHETICAL 134 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	34-55							
PY145_ADE07	HYPOTHETICAL 145 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	108-132							
PY14K_CSMV	HYPOTHETICAL 145 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	54-80							
PY18K_SSV1	HYPOTHETICAL 180 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-161						
PY206_ADE07	HYPOTHETICAL 206 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73							
PY23K_BNYVF	RNA-3 HYPOTHETICAL 247 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188							
PY29K_NPVAC	HYPOTHETICAL 29 9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106							
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90							
PY32K_SSV1	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142							
PY6K0_SSV1	HYPOTHETICAL 60 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44							
PY7K4_VACCV	HYPOTHETICAL 74 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36							
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25							
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120							
PY83K_SSV1	HYPOTHETICAL 83 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	135-173	343-363	657-675	764-784			

PCGENE	P1ZCT1ZIP	All Viruses (No Bacteriophage)							
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PY9_SOCMV	HYPOTHETICAL PROTEIN 9	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27						
PY97_ADE07	HYPOTHETICAL 9.7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	34-77						
PY9K3_SSV1	HYPOTHETICAL 9.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77					
PYALL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220						
PYB01_FOWPM	HYPOTHETICAL BAMH-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	334-374						
PYB07_FOWPM	HYPOTHETICAL BAMH-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121						
PYB09_FOWPM	HYPOTHETICAL BAMH-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67						
PYB10_FOWPM	HYPOTHETICAL BAMH-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100						
PYB12_FOWPM	HYPOTHETICAL BAMH-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	134-169					
PYBL3_SFV3L	BEL-3 PROTEIN	SEMLIKI FOREST VIRUS (TYPE 3 / STRAIN LK3)	113-128						
PYBL1_FOAMV	BEL-1 PROTEIN	HUMAN SPUMARETROVIRUS	32-78						
PYDH1_HSV3C	HYP 28.7 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230						
PYDH3_HSV3C	HYP 9.5 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90						
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222						
PYGA1_HSVMB	HYPOTHETICAL 21.6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190						
PYGA1_HSVMD4	HYPOTHETICAL 23.6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	173-190						
PYHLA_HCMVA	HYPOTHETICAL PROTEIN HRLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121						
PYHRU_VACCV	HYP HOST RANGE 27.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102						
PYI03_CVMA5	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156						
PYI0R_CVMI	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156						
PYI0R_CVMS	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	7-33						
PYK02_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90						
PYL12_ADE41	HYPOTHETICAL 8.0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	33-73						
PYM03_EBV	BMRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350			
PYM3P_IRV22	HYPOTHETICAL 13.9 KD PROTEIN	SUMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46						
PYOR1_ADEGI	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	39-80						
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83						
PYOR1_TTV1	HYPOTHETICAL 7.9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40						
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	33-49						
PYOR2_EAV	HYPOTHETICAL 25.6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-193						
PYOR3_LELV	HYPOTHETICAL 28.4 KD PROTEIN	LELYSTAD VIRUS	196-212						
PYOR3_LYX	HYPOTHETICAL 11.8 KD PROTEIN	LILY VIRUS X	71-92						
PYOR3_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30						
PYOR3_PVX	HYPOTHETICAL 13 KD PROTEIN	POTATO VIRUS X	11-34						
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34						
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29						
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31						
PYOR5_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86						
PYOR5_EAV	HYPOTHETICAL 28.7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158						
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26						
PYOR1_TTV1	HYPOTHETICAL 16.6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32						
PYOR1_TTV1	HYPOTHETICAL 18.5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39						
PYORM_TTV1	HYPOTHETICAL 31.6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256					
PYORP_TTV1	HYPOTHETICAL 29.2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115						
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126					
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126					
PYP47_NPVAC	HYPOTHETICAL 47.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234						
PYP62_NPVOP	HYPOTHETICAL 62.3 KD PROTEIN	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108						
PYP63_NPVOP	HYPOTHETICAL 40.0 KD PROTEIN	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230					
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31						
PYP0M_NPVLD	HYPOTHETICAL 8.5 KD PROTEIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35						
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66						
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74						
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56						
PYRP1_IRV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	28-43						
PYRP4_IRV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69						
PYRP5_IRV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285				

PCGENE ENTRYNAME	PIRCTLZIP PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 3	AREA 4	AREA 2	AREA 8	AREA 9
PYRR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYRR2_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB1_NPVOP	HYPOTHETICAL 24.0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVAE_VACCC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAF_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 19 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8.9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBG_VACCC	HYPOTHETICAL 11.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8.0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVDJ_VACCV	HYPOTHETICAL 8.6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDQ_VACCC	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7.1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVFF_VACCC	HYPOTHETICAL 8.8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVOA_VACCC	HYPOTHETICAL 14.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVKB_VACCC	HYPOTHETICAL 9.0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL3_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	130-166								
PY14K_CSMV	HYPOTHETICAL 14.3 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	54-80								
PY18K_SSV1	HYPOTHETICAL 18.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162							
PY206_ADE07	HYPOTHETICAL 20.6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73								
PY23K_BNYVF	RNA-3 HYPOTHETICAL 24.7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188								
PY39K_NPVAC	HYPOTHETICAL 39.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-108								
PY3_SCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90								
PY32K_SSV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142								
PY6K0_SSV1	HYPOTHETICAL 60 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44								
PY7K4_VACCV	HYPOTHETICAL 7.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36								
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-23								
PY7_SCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120								
PY85K_SSV1	HYPOTHETICAL 85.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-103	155-173	543-565	657-675	764-784				
PY8_SCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PY97_ADE07	HYPOTHETICAL 9.7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-71								
PY9K2_SSV1	HYPOTHETICAL 9.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77							
PYA1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYBL2_SFV3L	BEL-2 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78								
PYDH1_HSV3C	HYPOTHETICAL 28.7 KD PROTEIN IN DHFR 3'REGIO	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230								
PYDH3_HSV3C	HYPOTHETICAL 9.5 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYEC4_EBV	HYPOTHETICAL ECRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYGA1_HSVMB	HYPOTHETICAL 23.6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	135-190								
PYGA1_HSVMM	HYPOTHETICAL 23.6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HHLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYHR3_VACCV	HYPOTHETICAL HOST RANGE 27.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102								
PYI01_CVMAJ	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI0R_CVMI	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156								
PYI0R_CVMS	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	7-33								
PYK32_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYL12_ADE41	HYPOTHETICAL 8.0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	51-71								
PYM82_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350					
PYM5P_IRV22	HYPOTHETICAL 15.9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	21-46								

PCGENE	FASTA.ZIP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYOR1_ADEGI	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 33 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTVI	HYPOTHETICAL 79 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR3_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR2_EAV	HYPOTHETICAL 35 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR2_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29								
PYOR1_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR3_ADEGI	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR3_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYOR1_TTVI	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYOR1_TTVI	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYOR4_TTVI	HYPOTHETICAL 38 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYOR2_TTVI	HYPOTHETICAL 26 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	3-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 47 3 KD PROTEIN (N P47 3'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP63_NPVOP	HYPOTHETICAL 12 2 KD PROTEIN IN P6 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN IN P6 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	213-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYP04_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN (N POL 5'REGION	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRP1_DV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRP4_DV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRP3_DV6	REPETITIVE PROTEIN ORF3	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						
PYRR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	198-223								
PYRB3_EBV	HYPOTHETICAL BRRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB2_NPVOP	HYPOTHETICAL 24 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVAE_VACCC	HYPOTHETICAL 16 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAF_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 9 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10 3 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBO_VACCC	HYPOTHETICAL 11 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVD1_VACCV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDA_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	2-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVEF_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVOA_VACCC	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	103-127								
PYVKB_VACCC	HYPOTHETICAL 9 9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								

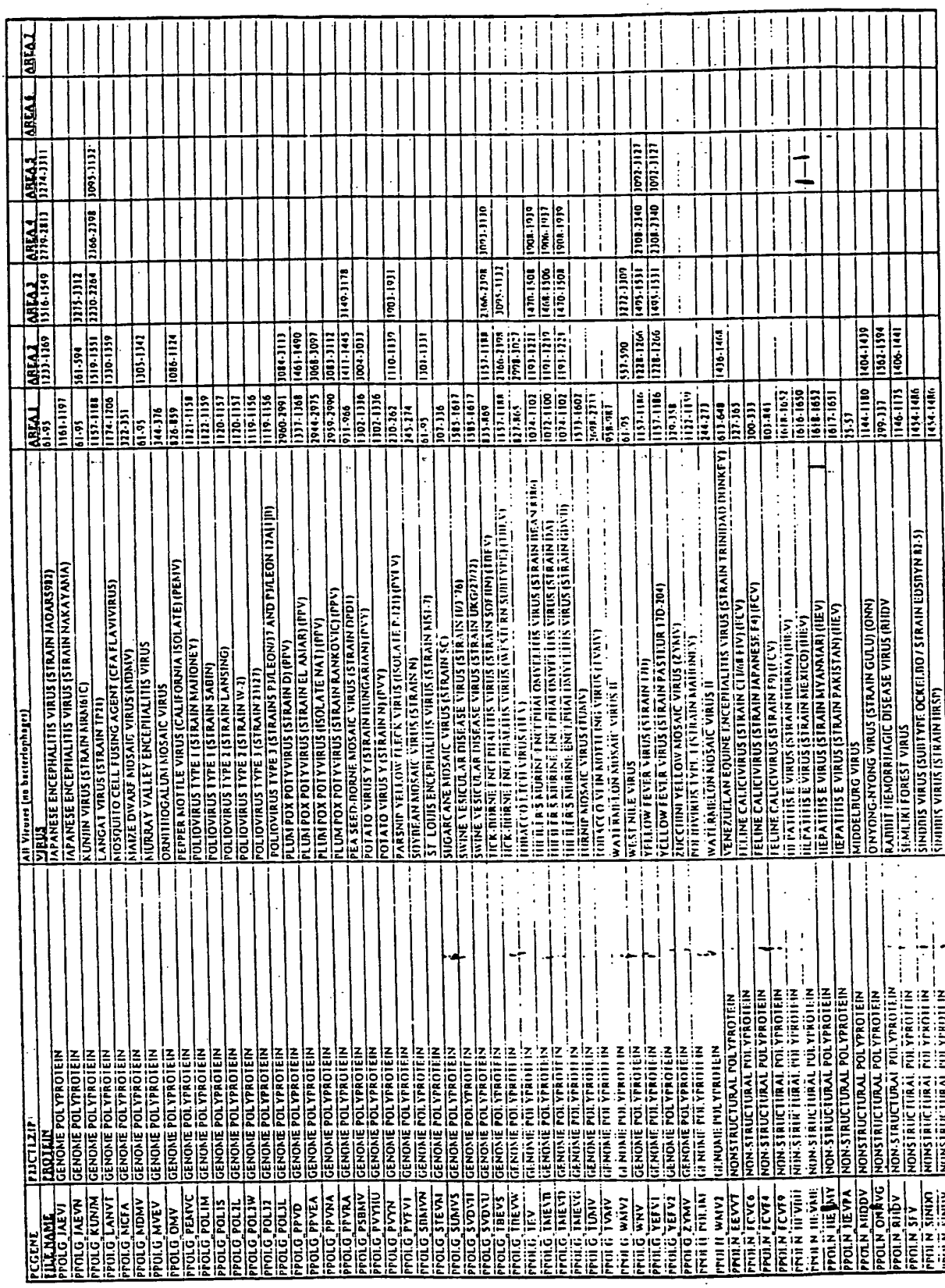
TABLE XIV

SEARCH RESULTS SUMMARY

FOR P23TLZIPC MOTIFS

FOR ILLUSTRATIVE PURPOSES ONLY

GENE	FUNCTION	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
GENOME	POLYPROTEIN	VIRUS	617-651	1041-1077				
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S) (TBRV)	118-147					
PPOL1_TSVR	RNA1 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY) (TOMBUSV)	1833-1866	2001-2037				
PPOL1_BVDEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27) (BEV)	102-135	1630-1670	2230-2260			
PPOL1_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	102-135	1560-1598	2110-2150			
PPOL1_BVDV5	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	276-251					
PPOL1_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	1110-1151					
PPOL1_COXA1	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	67-99					
PPOL1_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (ISOLATE G-9-V)	1601-1633					
PPOL1_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GREGORY)	1582-1614					
PPOL1_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1585-1617					
PPOL1_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1583-1615					
PPOL1_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	815-868	1585-1617				
PPOL1_DEN1S	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1111-1145	1485-1519	2401-2434			
PPOL1_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE 5275/90)	1112-1146					
PPOL1_DEN16	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	61-95	1112-1146				
PPOL1_DEN17	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	61-95	1112-1146				
PPOL1_DEN1D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	61-95					
PPOL1_DEN1I	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	61-95	1112-1146				
PPOL1_DEN1N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	364-398					
PPOL1_DEN1P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	61-95	1112-1146				
PPOL1_DEN1T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	817-856					
PPOL1_DEN1Y	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	61-95	2399-2432				
PPOL1_DEN1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE)	60-94					
PPOL1_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	774-806					
PPOL1_ENCV	GENOME POLYPROTEIN	ECTHOVIRUS 11 (STRAIN GREGORY)	1194-1226	1463-1501				
PPOL1_ENCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1196-1228	1465-1503				
PPOL1_FMDVO	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN ENC-D NONDIABETOGENIC)	1196-1228	1465-1503				
PPOL1_FMDV1	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN ENC-D DIABETOGENIC)	1196-1228	1465-1503				
PPOL1_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61) (APHTHOVIRUS A)	1016-1064	1098-1133	1167-1199	1465-1501		
PPOL1_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12) (APHTHOVIRUS A)	1016-1074	1098-1133	1167-1199	1465-1501		
PPOL1_HCV	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND DIBF5)	1098-1133	1167-1199	1465-1501			
PPOL1_HCVA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1) (HCV)	1640-1670					
PPOL1_HCVD	GENOME POLYPROTEIN	HEPATITIS C VIRUS (STRAIN ALFORT) (SWINE FEVER VIRUS)	1363-1393	1560-1588	2133-2159			
PPOL1_HCVH	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA) (SWINE FEVER VIRUS)	102-135	1560-1588	2111-2159			
PPOL1_HCVJ	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HEINBIKI) (HCV)	1640-1670					
PPOL1_HCVK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HJ) (HCV)	1640-1670					
PPOL1_HCVM	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476) (HCV)	354-391					
PPOL1_HCVP	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6) (HCV)	711-742					
PPOL1_HCVR	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8) (HCV)	711-742	1891-1924				
PPOL1_HCVS	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JAPANESE) (HCV)	1640-1670					
PPOL1_HCVSA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-HK1) (HCV)	1640-1670					
PPOL1_HCVT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN) (HCV	1640-1670					
PPOL1_HCVW	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 2A)	1314-1350	2068-2099				
PPOL1_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 4DC)	1314-1350	2068-2099				
PPOL1_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	1314-1350	2068-2099				
PPOL1_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	1515-1551	2069-2100				
PPOL1_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HA)	1515-1551	2069-2100				
PPOL1_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	1515-1551	2069-2100				
PPOL1_HPAV3	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	811-868	1317-1353				
PPOL1_HR14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1094-1132	2005-2041				
PPOL1_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	1413-1445	1816-1849	1981-2019			
PPOL1_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	1446-1475	1809-1843	1976-2012			
PPOL1_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1460-1492	1823-1856	1990-2026			
PPOL1_HRV9	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 9 (STRAIN 1059)	1108-1143					
PPOL1_HRV93	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 93 (STRAIN 1059)	222-260					
PPOL1_HRVSV	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN UK)	61-95	1233-1269	1516-1549	2779-2813	3274-3311	
PPOL1_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	61-95	1233-1269	1516-1549	2779-2813	3274-3311	
PPOL1_JAEV5	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SAIV)						



PCGENE	PDCTLZIP	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILENAME	PROTEIN	VIRUS	61..93	1233..1269	1516..1549	1779..2811	3274..3311		
PPOLG_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JADAR5983)	1161..1197						
PPOLG_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	61..93	581..594	3215..3312				
PPOLG_KUNJM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	1153..1188	1510..1531	2230..2264	2166..2198	3095..3132		
PPOLG_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	1174..1206	1530..1559					
PPOLG_MCFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	322..351						
PPOLG_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS (MDMV)	61..93	1305..1342					
PPOLG_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	344..376						
PPOLG_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	826..859	1086..1124					
PPOLG_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE) (PEMV)	1121..1158						
PPOLG_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1122..1159						
PPOLG_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1120..1157						
PPOLG_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1120..1157						
PPOLG_POLIW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1120..1157						
PPOLG_POLJJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 2121)	1119..1156						
PPOLG_POLJL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P/LEONID AND P/LEON 12A1) (P3)	1119..1156						
PPOLG_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D) (PPV)	2960..2991	3084..3113					
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR) (PPV)	1337..1368	1461..1490					
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT) (PPV)	2944..2975	3068..3097					
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC) (PPV)	2939..2990	3083..3112					
PPOLG_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPDI)	911..966	1411..1445	3149..3178				
PPOLG_STEVN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN) (PVY)	1302..1336	1004..1033					
PPOLG_PVYNW	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N) (PVY)	1307..1336						
PPOLG_PVYN	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121) (PYFV)	230..262	1110..1139	1901..1931				
PPOLG_PYFV	GENOME POLYPROTEIN	SOYBEAN MOSAIC VIRUS (STRAIN N)	245..274						
PPOLG_SMVSN	GENOME POLYPROTEIN	ST LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	61..93	1101..1131					
PPOLG_STEVM	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	307..336						
PPOLG_SVDV5	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG27/72)	1585..1617						
PPOLG_SVDV1I	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG27/72)	1585..1617						
PPOLG_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN) (TBEV)	133..169	1137..1188	2166..2198	3095..3130			
PPOLG_TBEVE	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE) (TBEV)	1137..1188	2166..2198	3095..3132				
PPOLG_TMEVW	GENOME POLYPROTEIN	TOBACCO MOSAIC VIRUS (STRAIN L)	827..865	1798..1829					
PPOLG_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (STRAIN MGH)	1024..1102	1193..1211	1470..1508	1908..1939			
PPOLG_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN)	1072..1100	1191..1219	1468..1506	1906..1937			
PPOLG_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1074..1102	1193..1221	1470..1508	1908..1939			
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1573..1607						
PPOLG_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS (TUMV)	3068..3211						
PPOLG_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS (TVMV)	658..687						
PPOLG_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	61..93	533..590	1272..1309				
PPOLG_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	1157..1186	1328..1366	1495..1531	2108..2140	3092..3127		
PPOLG_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	1157..1186	1328..1366	1495..1531	2108..2140	3092..3127		
PPOLG_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	339..358						
PPOLG_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS (ZYMV)	1122..1159						
PPOLH_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	344..373						
PPOLH_HAV1I	NON-STRUCTURAL POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HUMAN) (HAV)	1618..1652						
PPOLH_HAVMC	NON-STRUCTURAL POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MEXICO) (HAV)	1616..1650						
PPOLH_HEVM	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	1618..1653						
PPOLH_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	1617..1651						
PPOLN_HEVPA	NONSTRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS	35..53						
PPOLN_MIDDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	1144..1180	1404..1439					
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	299..337	1361..1394					
PPOLN_RIBV	NONSTRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV	1146..1175	1406..1441					
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1434..1486						
PPOLN_SINDX	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSTRYM 82-5)	1434..1486						
PPOLN_SINHA	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)							

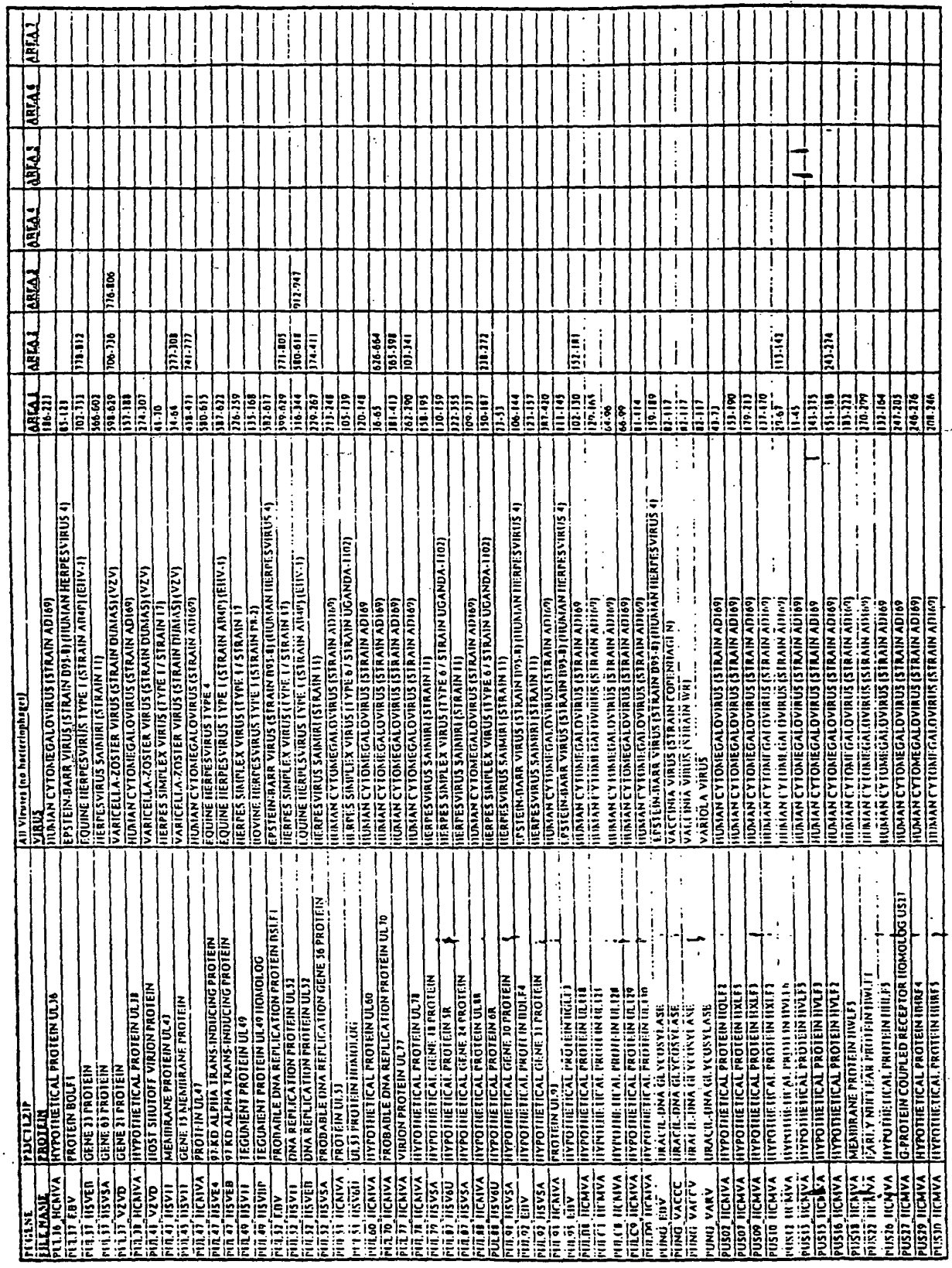
ENTRY	PROTEIN	AB Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
FILE NAME	PROTEIN	VIRUS	124-336					
PPOL_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	325-557					
PPOL_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA3)(TEN BROECK))	325-557					
PPOL_EEEV	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1201-1239					
PPOL_EEVB	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1203-1239					
PPOL_EEVT	STRUCTURAL POLYPROTEIN	O'NYONG-NYONG VIRUS (STRAIN GULU)(ONNV)	1150-1182	1201-1235				
PPOL_ONNG	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)(RRV)	1216-1250					
PPOL_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)(RRV)	1216-1250					
PPOL_RRVT	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1215-1251					
PPOL_SFV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSHYN 12-5)	1197-1233					
PPOL_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	1197-1233					
PPOL_SINDV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	1188-1224					
PPOL_WEEV	STRUCTURAL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 1046)(BIV)	142-233					
PPOL_BIV6	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	142-233					
PPOL_BIV27	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE) (BLV)	343-334					
PPOL_BLVAU	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)(CAEV)	206-240	322-355				
PPOL_CAEVC	POL POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	1234-1267	1484-1518	1750-1788	1800-1831		
PPOL_COYMV	PUTATIVE POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)(EIAV)	166-198	508-539				
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	166-198	508-539				
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)(EIAV)	166-198	503-538				
PPOL_EIAVY	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	126-154					
PPOL_FOAMV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	348-378					
PPOL_GALV	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK) (HTLV-I)	637-688					
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE) (HTLV-I)	637-688					
PPOL_HTLIC	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV/2SF2 ISOLATE) (HIV-1)	311-364	500-537				
PPOL_HIV1A1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HIV-1)	343-376	512-549				
PPOL_HIV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE) (HIV-1)	343-376	512-549				
PPOL_HIV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV-1)	343-376	512-549				
PPOL_HIV1BA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV-1)	330-363	499-536				
PPOL_HIV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	331-364	500-537				
PPOL_HIV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (HIV-1)	335-368	504-541				
PPOL_HIV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HIV-1)	330-363					
PPOL_HIV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HIV-1)	330-363	499-536				
PPOL_HIV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE) (HIV-1)	331-364	500-537				
PPOL_HIV1N5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HIV-1)	330-363	499-536				
PPOL_HIV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE) (HIV-1)	331-364	500-537				
PPOL_HIV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HV2 ISOLATE) (HIV-1)	343-376	512-549				
PPOL_HIV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (HIV-1)	330-363	499-536				
PPOL_HIV1RU	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDA) ISOLATE	330-363	499-536				
PPOL_HIV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE) (HIV-1)	330-363	499-536				
PPOL_HIVZ2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	335-386					
PPOL_HIVZCA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	351-386					
PPOL_HIVZNZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	344-387					
PPOL_HIVRH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE: PHILIPPINES) (HIV)	460-496					
PPOL_IRIA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE IAP-IIIB	186-220					
PPOL_ISRV	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS	650-681					
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	61-98	182-216	298-331			
PPOL_ONVV5	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-ONVV)	1031-1069	1179-1211				
PPOL_RTBV	POLYPROTEIN	RETROVIRUS-LIKE PARTICLE OF HUMAN T-CELL LEUKEMIA VIRUS (RTLV)	788-824	1491-1519	1579-1613			
PPOL_RTHV	POLYPROTEIN	RETROVIRUS-LIKE PARTICLE OF HUMAN T-CELL LEUKEMIA VIRUS (ISOLATE: PHILIPPINES) (RTHV)	788-824	1491-1519	1579-1613			
PPOL_SFV3	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3) (SFV-3)	337-363					
PPOL_SIVC1	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ) (STRAIN ANT)	335-388	524-561				
PPOL_SIVC	POL POLYPROTEIN	SOOTY MANGABEY IMMUNODEFICIENCY VIRUS (SIVSM) (STRAIN 1A11)	17-55	18-89				
PPOL_SIVCAV	PUTATIVE POL POLYPROTEIN	SOOTY MANGABEY CYLINDROTIC MOTTLE VIRUS	650-681					
PPOL_SRV1	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	80-117	201-235	317-350			
PPOL_SRV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	80-117	201-235	317-350			
PPOL_VIL1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-IK51)	80-117	201-235	317-350			
PPOL_VIL2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-IK52)	80-117	201-235	317-350			
PPP41_HSV6G	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	60-91					
PTP1P_AMVAC	PROTEIN-TYROSINE PHOSPHATASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	53-85					

PLGENE	FUNCTION	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILE_NAME	PROTEIN	VIRUS	111-149					
PREEP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS (CSV)	74-109					
PREV_BIV37	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	44-79					
PREV_EIAV9	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1169) (EIAV)	44-79					
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	74-109					
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	35-62					
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE) (SIV-AGM)	610-666					
PRIR1_ASFM2	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	379-411	391-430	449-477			
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-92	503-531				
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	201-235					
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN COPENHAGEN)	201-235					
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN WR)	201-235					
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARIOLA VIRUS	201-235					
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34-72	211-254	448-516			
PRNIL_AVEVR	RNIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN ROUS-ASSOCIATED VIRUS TYPE 1	149-177					
PRNIL_AVIII	RNIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN RETROVIRUS IC10	133-161					
PRP94_VACCV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIF	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	399-427					
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIF	VARIOLA VIRUS	399-427					
PRPO1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR)	1005-1033					
PRPO2_CAPVK	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPEPTIDE	CAPRIPOXVIRUS (STRAIN KS-1)	597-633	667-696				
PRPO2_COWPX	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPEPTIDE	COWPOX VIRUS (CPV)	202-236	543-578				
PRPO2_VACCV	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	202-236	543-578				
PRPO2_VARV	DNA-DIRECTED RNA POLYMERASE 133 KD POLYPEPTIDE	VARIOLA VIRUS	202-236	543-578				
PRPO7_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	18-66					
PRPO7_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VARIOLA VIRUS	18-66					
PRPO8_FOWP1	DNA-DIRECTED RNA POLYMERASE 18 KD POLYPEPTIDE	FOWLPOX VIRUS (STRAIN FP-1)	57-88					
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS (LV)	1233-1268	1333-1363	1426-1457			
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS (EAV)	171-207	1041-1072				
PRRP1_DIVI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	96-133	199-234				
PRRP1_IAV17	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	138-170					
PRRP1_INCJ1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	564-598					
PRRP1_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	398-433	484-518				
PRRP1_IADU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	484-518					
PRRP1_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	484-518					
PRRP1_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	484-518					
PRRP1_IAIL0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	484-518					
PRRP1_IAIHE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/56)	484-518					
PRRP1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	484-518					
PRRP1_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	484-518					
PRRP1_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	484-518					
PRRP1_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	484-518					
PRRP1_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	484-518					
PRRP1_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	484-518					
PRRP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	484-518					
PRRP1_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/43/85)	484-518					
PRRP1_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	484-518					
PRRP1_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	484-518					
PRRP2_IAV17	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	484-518					
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	484-518					
PRRP2_IAZ31	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/31)	484-518					
PRRP2_IAZ32	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/30)	484-518					
PRRP2_IAZ11	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/77)	484-518					
PRRP2_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	515-553	585-613				
PRRP2_IAZUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	515-553					
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/SWITZERLAND)	579-613					
PRRP2_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	515-613					
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	515-613					
PRRP2_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/22/78)	585-613					

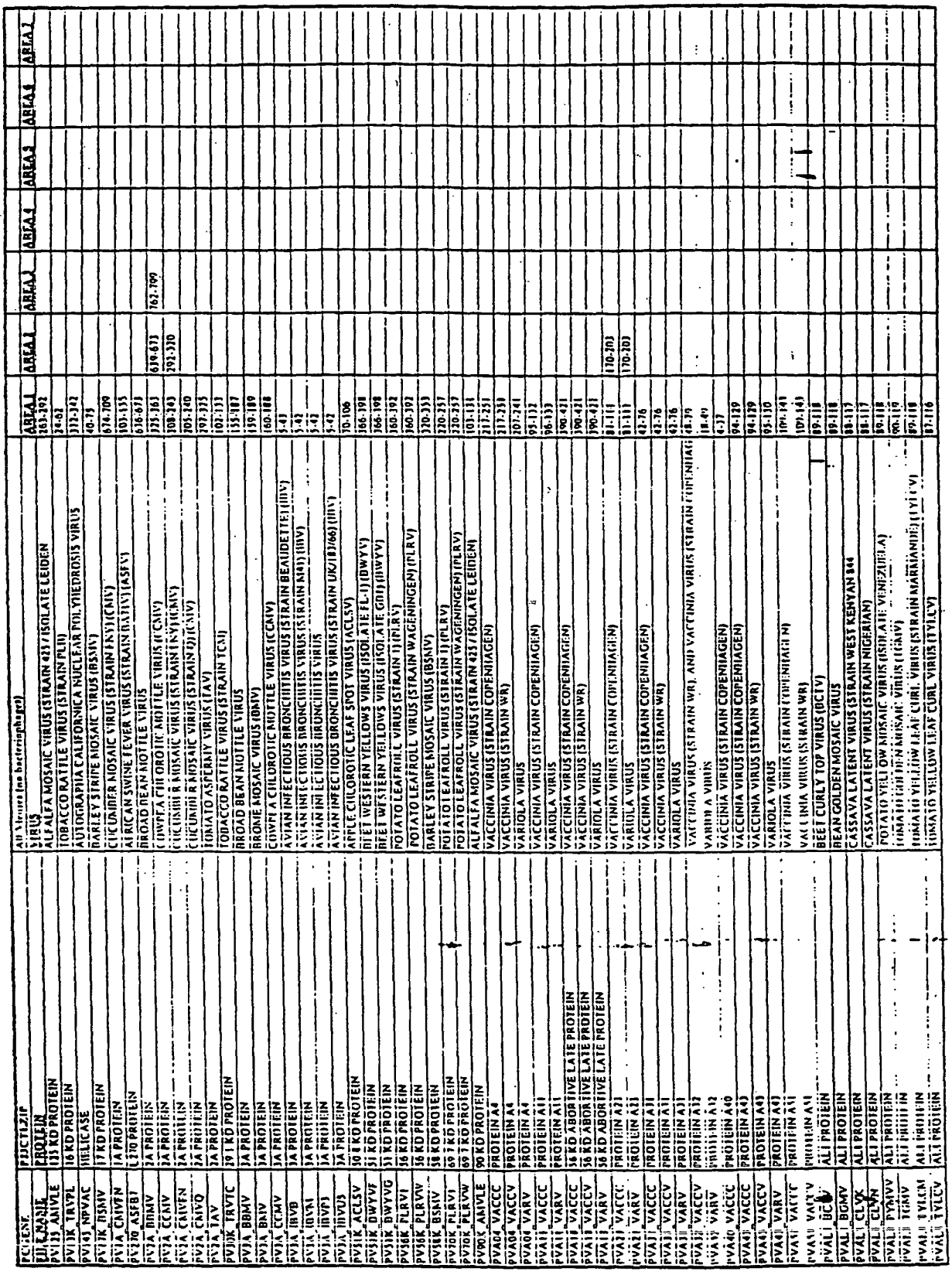
PGGENE	FUNCTION	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
GENENAME	PROTAIN	VIRUS	585-611						
PRRP_IAJPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	585-611						
PRRP_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	585-611						
PRRP_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	585-611						
PRRP_IASE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/1980)	585-611						
PRRP_IATKN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	585-611						
PRRP_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	585-611						
PRRP_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	585-611						
PRRP_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	735-769						
PRRP_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	609-641						
PRRP_INCDE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	609-641						
PRRP_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	609-641						
PRRP_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	THOGOTO VIRUS (THO)	109-141	324-336					
PRRPA_CVI22	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	410-443	712-745	1261-1295	1963-1999	2078-2112	2474-2508	3153-3191
PRRPA_CVMHI	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	708-740	1544-1577	1737-1785	1933-1961			
PRRPB_DEV	RNA-DIRECTED RNA POLYMERASE	DENGUE VIRUS (DEV)	941-969	2137-2169	2178-2206				
PRRPD_CVMAS	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	146-180	684-714	1669-1722	2698-2730			
PRRPD_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	146-180	684-714	1687-1720	2156-2191	2696-2728		
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	177-207	322-350	482-515				
PRRPB_CVPR1	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS	80-113						
PRRPB_IHVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	636-670						
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	503-531	1096-1128					
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118) (KOREAN HEMORRHAGIC FEVER VIRUS)	1918-1971						
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	892-932	1181-1213					
PRRPL_MABVM	RNA-DIRECTED RNA POLYMERASE BETA SUBUNIT	MARBURG VIRUS (STRAIN MUSOKE)	144-176	698-736	1042-1074	1797-1831			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	144-176	698-736	1042-1074	1833-2353			
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	193-227	647-681	788-815	1160-1192	1886-1914		
PRRPL_MUMPS	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1082-1913						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45) (NDV)	626-661	1371-1603					
PRRPL_PIJIH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA) (PIV-1)	268-305	558-595	614-648	1562-1599	1681-1912	2025-2053	
PRRPL_PIJIT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	41-76	735-764	784-814	2111-2139			
PRRPL_RAVPV	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	60-90	804-837	1365-1394	1930-1962			
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	60-90	804-837	1365-1394	1930-1962			
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS (RDV)	1209-1233						
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	1018-1055	2009-2044					
PRRPL_SFNDS	RNA POLYMERASE BETA SUBUNIT	SINDBIS VIRUS (STRAIN Z / HOST MUTANTS)	194-231	733-769	784-814	2140-2177			
PRRPL_SFNHE	RNA POLYMERASE BETA SUBUNIT	SINDBIS VIRUS (STRAIN HENNEBERG 56)	194-231	733-769	784-814	2140-2177			
PRRPL_SFNHZ	RNA POLYMERASE BETA SUBUNIT	SINDBIS VIRUS (STRAIN Z)	194-231	733-769	784-814	2140-2177			
PRRPL_SEDUB	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	194-231	1938-1971	2081-2119				
PRRPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR) (SV5)	537-594	1094-1122	2020-2051				
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS (SYNV)	126-164	605-634	820-856	918-951	1484-1517		
PRRPL_TSWVD	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CENTAURUM) (TSWV)	43-76	843-880	2266-2298	2169-2403	2481-2511	2805-2840	
PRRPL_UUKV	RNA POLYMERASE	UUKUNIEMI VIRUS (UUK)	1017-1051	1147-1177	1293-1331	2060-2095			
PRRPL_VSVII	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	309-346	312-349	1011-1039	1562-1597	1936-1989		
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	1011-1039	1956-1989					
PRRPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	138-171	209-246	312-349	961-999	1011-1039	1739-1772	2031-2067
PRRPO_BWYVF	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-4) (BWYV)	246-274						
PRRPO_BYDVM	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	722-755						
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV) (BYDV)	722-755						
PRRPO_CARMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS (CARMV)	4-37						
PRRPO_CGMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	403-481	725-755	1095-1132	1565-1597			
PRRPO_CNV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CUCUMBER NECROSIS VIRUS (CNV)	478-501						
PRRPO_CRSV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CYMBIDIUM RINGSPOT VIRUS	28-62	267-300	470-501				
PRRPO_IBDV1	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70) (IBDV)	186-218	374-402					
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS	260-288	511-543	599-627				
PRRPO_IPNV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	360-390	749-778					
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP) (IPNV)	360-390	749-778					

PECLENE	PROTEIN	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	109..137	263..291	2077..2106				
PRRPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	109..137						
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	109..137						
PRRPO_MCMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS (MCMV)	16-48	53-81					
PRRPO_PLRV1	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV	376-807						
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	376-807						
PRRPO_PPMV5	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN) (PMMV)	175-407	702-730	859-891	1069-1106	1533-1565		
PRRPO_RCMAV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS (RCNMV)	278-314	320-353					
PRRPO_REOV	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DJONES)	284-315						
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	35-60	200-231	247-276				
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	200-231	247-276					
PRRPO_ROTPG	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	200-231	247-276					
PRRPO_ROTSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	35-60	200-231	247-276				
PRRPO_TACV	RNA POLYMERASE	TACARIBE VIRUS	17-52	109-138	2078-2112				
PRRPO_TBSVC	PROBABLE RNA-DIRECTED RNA POLYMERASE	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY) (TBSV)	470-501						
PRRPO_TCV	PROBABLE RNA-DIRECTED RNA POLYMERASE	TURNIP CRINKLE VIRUS (TCV)	280-318						
PRRPO_TMGMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	67-97	128-159	209-244	376-406	450-483	855-887	1527-1559
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE) (TMV)	128-159	376-406	700-728	1533-1565			
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN) (TMV)	128-159	376-406	700-728	1533-1565			
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO) (TMV)	128-159	376-406	700-728	857-889	1533-1565		
PRRPO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	331-363						
PRRPO_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	5-40	214-270					
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	295-332						
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	295-332						
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP3-CA)	295-332						
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	295-332						
PRRPP_MUMVI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	211-248						
PRRPP_MUMVE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	212-249						
PRRPP_MUMVM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-249						
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/1/1) (NDV)	220-253						
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45) (NDV)	220-253						
PRRPP_PI3H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (PIV-3)	216-253						
PRRPP_PI3IT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA) (PIV-3)	216-253						
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	220-257	332-364					
PRRPP_PI4IB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	220-257	332-364					
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-168						
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	216-244						
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	216-244						
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND RABIES VIRUS (STRAIN PM)	216-244						
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	89-122	216-244					
PRRPP_RADVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	216-244						
PRRPP_SENDS	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z/HOST MUTANTS)	510-566						
PRRPP_SENDA	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/64)	510-566						
PRRPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	510-566						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	510-566						
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	510-566						
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	199-236						
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN MISSOURI)	198-230						
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN INDIAN)	193-230						
PSBII_VACCC	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-53						
PSPII_VACCV	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN WR)	112-140						
PSPII_VARV	SERINE PROTEINASE INHIBITOR 1	VARIOLA VIRUS	116-144						
PTAGE_LSWPV	TRANS-ACTIVATOR PROTEIN (TP1)	LSWI POX VIRUS	199-230						
PSODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	19-53	627-659	671-701				
PSPIR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	16-46	138-172					
PSPII_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	167-200						
PSPII_VACCC	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	112-140						
PSPII_VACCV	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN WR)	112-140						
PSPII_VARV	SERINE PROTEINASE INHIBITOR 1	VARIOLA VIRUS	116-144						
PTAGE_LSWPV	TRANS-ACTIVATOR PROTEIN (TP1)	LSWI POX VIRUS	199-230						

PIGENE	PIDCTLZIP	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 2	AREA 4	AREA 7
FILENAME	PROTEIN	VIRUS	99-129	172-210	461-491			
PIALA_BIDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS (BFDV)	106-138					
PIAMI_POVIA	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	43-80					
PIAMII_POVMJ	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	43-80					
PIAMII_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43-80					
PIAMII_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	43-80					
PIASM_POVBA	SMALL T ANTIGEN	POLYOMAVIRUS BK (STRAIN AS)	130-162					
PIASM_POVBK	SMALL T ANTIGEN	POLYOMAVIRUS BK	130-162					
PIASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMAVIRUS	106-138					
PIASM_POVMA	SMALL T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43-80					
PIASM_SV40	SMALL T ANTIGEN	SIMIAN VIRUS 40 (SV40)	132-164					
PIEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	143-213	1469-1503	1791-1819	3102-3137		
PIEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	161-192	699-736	812-840	3199-3228		
PIEGU_HSVSG	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN GS)	222-259	566-601	615-643	1436-1469	3017-3052	
PIEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	263-297	559-589	1072-1106	3761-3792		
PIEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	467-505	714-751	823-861	926-960	3593-3626	3431-3457
PIERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	169-400					
PIHAF_AVISA	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	230-267					
PIICP2_ASFD7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	119-153	1105-1142				
PIICP2_ASFKH	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE KHAWLI 1/2 1971 ASFV)	119-153	1104-1141				
PIREL_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	189-226					
PIVSV_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	121-156					
PUIC_HSV6U	PROTEIN IL	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	171-203					
PUIFF_NPVAC	F CDV STEROID UDP-GLUCOSYLTRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	183-219	387-425	432-464			
PUI_02_HCMVA	HYPOTHETICAL PROTEIN UL2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-59					
PUI_06_EBV	VIRION PROTEIN UL6	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	135-186					
PUI_06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-436					
PUI_06_HSVEB	VIRION GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	222-251	437-475				
PUI_06_HSVSA	VIRION GENE 46 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	299-330					
PUI_06_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	223-332	502-530				
PUI_07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186-216					
PUI_07_HSVEB	GENE 33 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	Nov-39					
PUI_08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	63-96					
PUI_08_HSV11	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	614-648					
PUI_08_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	227-255					
PUI_09_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	618-713					
PUI_09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	168-204					
PUI_14_PRVNI	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	40-76					
PUI_15_HSV11	PROTEIN UL15	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	23-52					
PUI_17_HSV6U	PROTEIN UL16	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	103-139					
PUI_21_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	294-328					
PUI_21_PRVNI	PROTEIN UL21 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	241-271					
PUI_23_VZVD	GENE 19 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	46-92	175-412				
PUI_24_HCMVA	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	53-87					
PUI_24_ILTV	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V811)	158-196					
PUI_25_HSVEB	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	343-379					
PUI_25_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	296-333					
PUI_25_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	540-571					
PUI_28_HCMVA	HYPOTHETICAL PROTEIN UL28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	287-316					
PUI_33_HCMVA	HYPOTHETICAL PROTEIN UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	464-501					
PUI_33_HSVSA	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	161-197					
PUI_3_EBV	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN BFLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	387-405					
PUI_33_HSV11	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN UL33	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-438	564-592				
PUI_33_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	81-115					
PUI_33_HSVSA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 68	HERPESVIRUS SAIMIRI (STRAIN 11)	276-307					
PUI_33_VZVD	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 36	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	533-561					
PUI_34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	98-130					
PUI_35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	138-169					

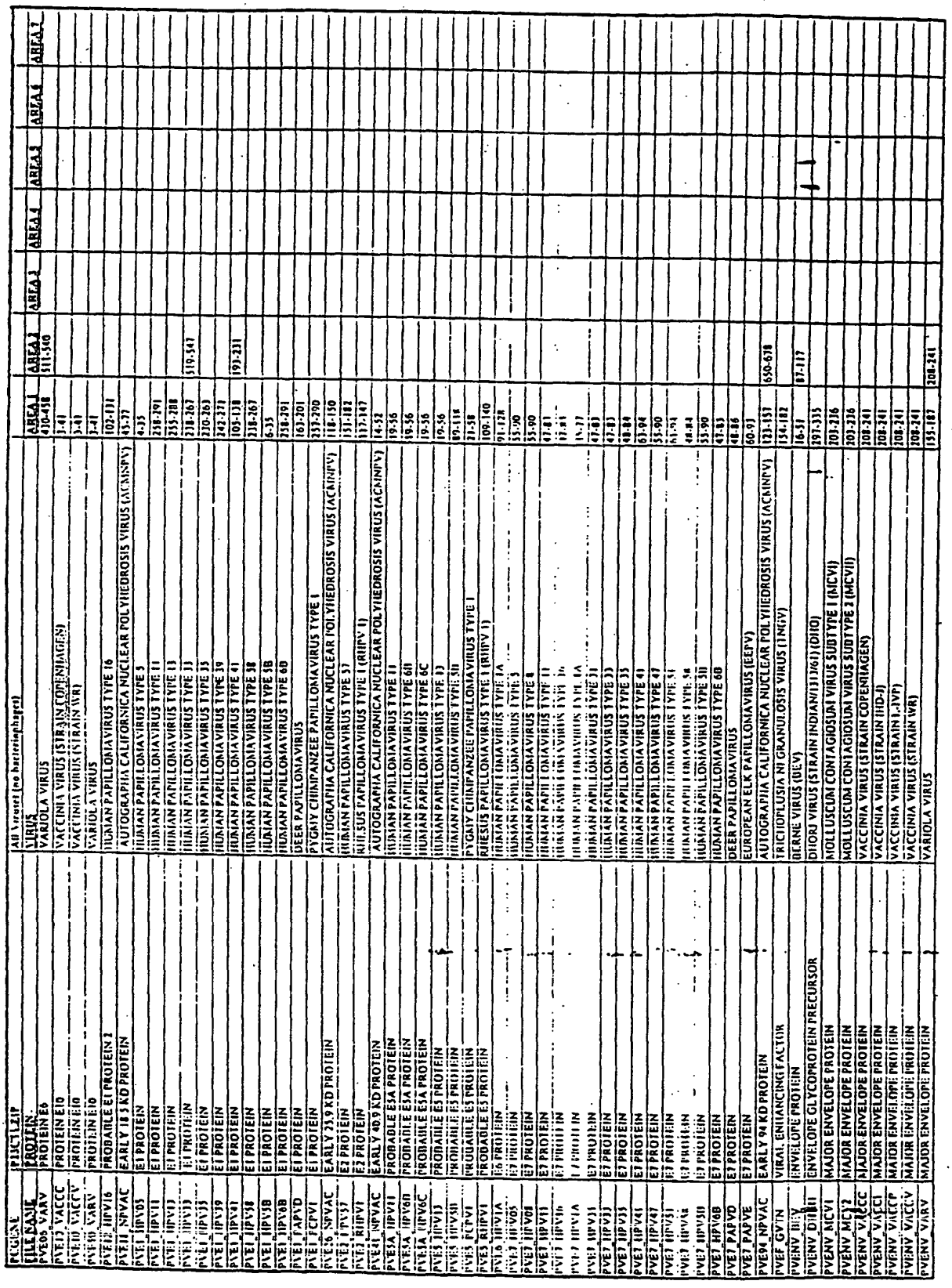


PFIG1.SE	PFIG1.ZIP	All Viruses (no bacteriophage)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	ARFA.1
FILENAME	PROTEIN	VIRUS	186.221						
PFIG.16 HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)							
PFIG.17 EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	85.181						
PFIG.17 HSVEB	GENE 33 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	102.311	778.812					
PFIG.17 HSVSA	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366.603						
PFIG.17 VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	598.639	706.736	776.806				
PFIG.38 HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137.188						
PFIG.41 VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	274.307						
PFIG.43 HSVII	MEMBRANE PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41.76						
PFIG.45 HSVII	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34.64	277.308					
PFIG.47 HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	438.471	741.777					
PFIG.47 HSVE4	87 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	580.615						
PFIG.47 HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	387.622						
PFIG.49 HSVII	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	276.259						
PFIG.49 HSVIP	TEGUMENT PROTEIN UL49 HOMOLOG	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	135.168						
PFIG.52 EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	382.617						
PFIG.52 HSVII	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	309.619	771.805					
PFIG.52 HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	116.344	580.618	912.947				
PFIG.52 HSVSA	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	329.267	374.411					
PFIG.53 HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213.248						
PFIG.53 HSVGI	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	105.139						
PFIG.60 HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120.148						
PFIG.70 HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	36.63	626.664					
PFIG.77 HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	381.413	765.598					
PFIG.78 HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	262.390	101.341					
PFIG.79 HSVSA	HYPOTHETICAL GENE 18 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	158.195						
PFIG.87 HSVGU	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	130.159						
PFIG.88 HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	322.355						
PFIG.88 HSVSA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	109.337						
PFIG.90 HSVGU	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	130.187	218.372					
PFIG.91 HSVSA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	77.53						
PFIG.92 EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	106.144						
PFIG.93 HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	123.137						
PFIG.93 HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	387.430						
PFIG.95 EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	111.145						
PFIG.98 HCMVA	HYPOTHETICAL PROTEIN UL98	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102.130	152.181					
PFIG.99 HCMVA	HYPOTHETICAL PROTEIN UL99	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	197.165						
PFIG.128 HCMVA	HYPOTHETICAL PROTEIN UL128	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	64.96						
PFIG.129 HCMVA	HYPOTHETICAL PROTEIN UL129	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	66.99						
PFIG.130 HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81.114						
PUNG EBV	ORACIL-DNA GLYCOSYLASE	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	159.189						
PUNG VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82.117						
PUNG VARTV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS (STRAIN WH)	87.117						
PUNG VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	87.117						
PUS01 HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	49.73						
PUS07 HCMVA	HYPOTHETICAL PROTEIN HXLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153.190						
PUS09 HCMVA	HYPOTHETICAL PROTEIN HXLF9	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179.213						
PUS10 HCMVA	HYPOTHETICAL PROTEIN HXLF10	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137.170						
PUS12 HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	95.67	113.143					
PUS13 HCMVA	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11.45						
PUS15 HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141.315						
PUS16 HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151.188	243.274					
PUS16 HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	183.222						
PUS18 HCMVA	MEMBRANE PROTEIN HVLF8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	170.299						
PUS22 HCMVA	HYPOTHETICAL PROTEIN HVLF9	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	132.164						
PUS26 HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	247.285						
PUS27 HCMVA	HYPOTHETICAL PROTEIN HRL4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	240.276						
PUS29 HCMVA	HYPOTHETICAL PROTEIN HRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208.246						



PCIGENE	PJECTLZIP	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
PVII3_ALVMV	PROTEIN	VIRUS	183-192					
PVII3_AMVLE	183 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	24-62					
PVII3K_TRVPL	183 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLI)	312-342					
PVII4_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	40-75					
PVII8K_BSMV	17 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (STRAIN ANY) (CMV)	674-709					
PVIIA_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CMV)	103-135					
PVII0_ASFB1	110 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	616-651					
PVIIA_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	775-783	639-673	762-799			
PVIIA_CCMV	1A PROTEIN	CCMV A CHLOROTIC MOTTLE VIRUS (CCMV)	108-143	292-330				
PVIIA_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CMV)	205-240					
PVIIA_CMVQ	1A PROTEIN	TOMATO ASPERMY VIRUS (TAV)	297-335					
PVIIA_TAV	1A PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	102-133					
PVIIK_TRVTC	191 KD PROTEIN	BROAD BEAN MOTTLE VIRUS	135-187					
PVIJA_BBMV	1A PROTEIN	BROME MOSAIC VIRUS (BMV)	159-189					
PVIJA_BMV	1A PROTEIN	CCMV A CHLOROTIC MOTTLE VIRUS (CCMV)	160-188					
PVIJA_CCMV	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	5-41					
PVIJA_IBVB	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41) (IBV)	5-41					
PVIJA_IBVM	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	5-41					
PVIJA_IBVUS	1A PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS (ACLSV)	70-108					
PVIJK_ACLSV	50 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	166-198					
PVIJK_BWYVF	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GDH) (BWYV)	166-198					
PVIJK_BWYVG	51 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN T) (PLRV)	160-192					
PVI6K_PLRVI	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	160-192					
PVI6K_PLRVW	56 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	320-353					
PVI6K_BSMV	58 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN T) (PLRV)	320-357					
PVI6K_PLRVI	65 ? KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	320-357					
PVI6K_PLRVW	65 ? KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	103-131					
PVI6X_AMVLE	90 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	211-251					
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	211-251					
PVA04_VACCV	PROTEIN A4	VARIOLA VIRUS	207-241					
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-132					
PVA11_VACCC	PROTEIN A11	VARIOLA VIRUS	96-133					
PVA11_VARV	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	390-431					
PVA12_VACCC	35 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	390-431					
PVA12_VACCV	35 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	390-431					
PVA12_VARV	35 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-111	170-203				
PVA21_VACCC	PROTEIN A21	VARIOLA VIRUS	81-111	170-203				
PVA21_VARV	PROTEIN A21	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-76					
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN WR)	42-76					
PVA31_VACCV	PROTEIN A31	VARIOLA VIRUS	42-76					
PVA31_VARV	PROTEIN A31	VACCINIA VIRUS (STRAIN WR) AND VACCINIA VIRUS (STRAIN COPENHAGEN)	18-79					
PVA40_VACCC	PROTEIN A40	VARIOLA VIRUS	18-49					
PVA40_VACCV	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-37					
PVA40_VARV	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	94-129					
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	94-129					
PVA43_VACCV	PROTEIN A43	VARIOLA VIRUS	95-130					
PVA43_VARV	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-141					
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	109-141					
PVA47_VACCV	PROTEIN A47	BEET CURLY TOP VIRUS (BCTV)	89-118					
PVA47_VARV	PROTEIN A47	BEAN GOLDEN MOSAIC VIRUS	89-118					
PVAL1_BCTV	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844	88-117					
PVAL1_BGMV	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	88-117					
PVAL1_CLVK	ALI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	86-118					
PVAL1_CLVN	ALI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS (TGMV)	90-119					
PVAL1_PYMVV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARIANDE) (TYLCV)	89-118					
PVAL1_TGMV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV)	87-116					
PVAL1_TYLCM	ALI PROTEIN							
PVAL1_TYLCV	ALI PROTEIN							

PCGENE FILENAME	FUNCTION PROTEIN	All Viruses (no bacteriophage) VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PVAL1_BCTV	ALI PROTEIN	BEET CURLY TOP VIRUS (BCTV)	82-113						
PVAL1_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-113						
PVAL1_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-113						
PVAL1_TYLCM	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE) (TYLCV)	78-116						
PVAL1_TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV)	77-113						
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841) (CAMV)	20-53	81-116					
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4I) (CAMV	20-53	102-130					
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC) (CAMV)	20-53	81-116					
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY1153) (CAMV)	20-53	81-116					
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV1417) (CAMV)	20-53	81-116					
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG) (CAMV)	20-53	81-116					
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	124-156	489-525					
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	124-156	489-525					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-525						
PVB04_COWPX	PROTEIN B4	COWPOX VIRUS (CPV)	89-126						
PVB16_COWPX	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	89-126						
PVB16_VACCV	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	213-244						
PVB19_VACCC	SURFACE ANTIGEN $ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	211-242						
PVB19_VACCD	SURFACE ANTIGEN $ PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	211-242						
PVB19_VACCV	SURFACE ANTIGEN $ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	211-242						
PVB19_VARV	SURFACE ANTIGEN $ PRECURSOR	VARIOLA VIRUS	211-242						
PVBRI_BGMV	BRI PROTEIN	DEAN GOLDEN MOSAIC VIRUS	166-198						
PVC01_SFVKA	G-PROTEIN COUPLED RECEPTOR HOMOLOG C1	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	98-130						
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-139	182-216					
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	109-139	183-215					
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	109-139						
PVC06_VACCC	PROTEIN C6	VACCINIA VIRUS (STRAIN COPENHAGEN)	36-67						
PVC06_VACCV	PROTEIN C6	VACCINIA VIRUS (STRAIN WR)	36-67						
PVC06_VARV	PROTEIN C6	VARIOLA VIRUS	36-67						
PVC07_SFVKA	HYPOTHETICAL PROTEIN C7	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	60-97						
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	571-610						
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	571-610						
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	85-121						
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-158						
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	121-158						
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	121-158						
PVC11_VACCC	PROTEIN C11(B1)	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-34						
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	148-181	200-230					
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-78	128-161	258-286				
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	19-49						
PVCAP_HSV2U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	124-161	666-696	841-869				
PVCAP_HSVEB	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	17-54	198-232	273-301				
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	144-179	196-226	734-769	1062-1096			
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S) (PRV)	189-221	260-289					
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	31-68						
PVCDN_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	86-115						
PVCDN_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-114						
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-50	146-182					
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-50	146-182					
PVD01_VARV	PROTEIN D1	VARIOLA VIRUS	12-50	146-182					
PVD01_FOWPI	32.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	315-353						
PVD03_VACCC	PROTEIN D3	VACCINIA VIRUS (STRAIN COPENHAGEN)	320-348						
PVD03_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	320-348						
PVD03_VARV	PROTEIN D3	VARIOLA VIRUS	320-348						
PVD10_FOWPI	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	114-142						
PVF05_VACCD	PROTEIN F5	VACCINIA VIRUS (STRAIN DAIREN I)	31-60						
PVF05_VACCV	PROTEIN F5	VACCINIA VIRUS (STRAIN COPENHAGEN)	226-260	430-458	511-540				
PVF05_VACCV	PROTEIN F5	VACCINIA VIRUS (STRAIN WR)	226-260	430-458	511-540				



PFGENE	PFACT2IP	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7
FILE NAME	PROTEIN	VIRUS	410-458	511-560				
PVE05_VARV	PROTEIN E5	VARIOLA VIRUS	410-458	511-560				
PVE10_VACCC	PROTEIN E10	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-41					
PVE10_VACCV	PROTEIN E10	VACCINIA VIRUS (STRAIN WR)	3-41					
PVE10_VARV	PROTEIN E10	VARIOLA VIRUS	3-41					
PVE12_HPV16	PROBABLE E1 PROTEIN 2	HUMAN PAPILLOMAVIRUS TYPE 16	102-151					
PVE11_NPVAC	EARLY 18.3 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	45-77					
PVE1_HPV05	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	4-35					
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	238-291					
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	235-288					
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	238-267	519-547				
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	220-263					
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	242-311					
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	105-138	193-231				
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	238-267					
PVE1_HPV59	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 59	6-35					
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	238-291					
PVE1_PAPVD	E1 PROTEIN	DEER PAPILLOMAVIRUS	161-201					
PVE1_PCPVI	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	237-290					
PVE16_NPVAC	EARLY 21.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	118-150					
PVE2_HPV37	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 37	131-182					
PVE2_RHPVI	E2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	117-167					
PVE44_NPVAC	EARLY 40.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	14-52					
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-56					
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	19-56					
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	19-56					
PVE5_HPV33	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-56					
PVE5_PCPVI	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	105-138					
PVE5_RHPVI	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	21-58					
PVE6_HPV1A	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	109-140					
PVE7_HPV05	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	91-128					
PVE7_HPV06	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6	55-90					
PVE7_HPV11	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	55-90					
PVE7_HPV16	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	41-81					
PVE7_HPV1A	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	41-81					
PVE7_HPV31	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	10-77					
PVE7_HPV33	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	47-83					
PVE7_HPV35	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	47-83					
PVE7_HPV41	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	48-84					
PVE7_HPV47	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	63-94					
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	55-90					
PVE7_HPV56	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 56	61-94					
PVE7_HPV58	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	48-84					
PVE7_HPV59	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 59	55-90					
PVE7_HPV6B	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	47-83					
PVE7_PAPVD	E7 PROTEIN	DEER PAPILLOMAVIRUS	48-86					
PVE8_PAPVE	E7 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS (EEPV)	60-93					
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	123-153	650-678				
PVEF_GVIN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	134-182					
PVENV_BEV	ENVELOPE PROTEIN	BERNE VIRUS (BEV)	16-51	87-117				
PVENV_DIHHT	ENVELOPE GLYCOPROTEIN PRECURSOR	DIHORJ VIRUS (STRAIN INDIANA) (DIHO)	297-335					
PVENV_MCV1	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCV1)	201-236					
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCV2)	201-236					
PVENV_VACCC	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	208-241					
PVENV_VACCI	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN IHD-J)	208-241					
PVENV_VACCP	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN J-JVP)	208-241					
PVENV_VACCV	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN WR)	208-241					
PVENV_VARV	MAJOR ENVELOPE PROTEIN	VARIOLA VIRUS	135-187	208-241				

PCGENE	P2JCTL2IP	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7
FILENAME	PROTEIN	VIRUS							
PVF01_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	2-40	61-93					
PVF01_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	2-40	61-93					
PVFP1_FOWPV	PROTEIN FP1	FOWLPOX VIRUS	297-330						
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	237-267						
PVFP7_CAPVK	PROTEIN F7	CAPRIPOXVIRUS (STRAIN KS-1)	89-118						
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-61						
PVFUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	28-61						
PVFUS_VARV	14 KD FUSION PROTEIN	VARIOLA VIRUS	28-61						
PVG01_HSV11	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	317-346						
PVG02_HSVED	HYPOTHETICAL GENE 2 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	163-196						
PVG02_VACCV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTEI	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGI	93-120						
PVG02_VARV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTEI	VARIOLA VIRUS	93-120						
PVG03_HSV11	HYPOTHETICAL GENE 3 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	108-136						
PVG05_HSV11	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	54-83						
PVG06_VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	99-136						
PVG06_VARV	PROTEIN G6	VARIOLA VIRUS	99-136						
PVG07_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	113-145						
PVG07_VARV	PROTEIN G7	VARIOLA VIRUS	113-145						
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	303-338						
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	266-301						
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	303-338						
PVG11_HSV11	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	150-183						
PVG12_HSV11	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	206-243						
PVG12_HSV5A	HYPOTHETICAL GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-106						
PVG1_SPV1R	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	354-392	303-337	414-452				
PVG32_HSV11	HYPOTHETICAL GENE 32 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	300-337	647-678					
PVG33_HSV11	HYPOTHETICAL GENE 33 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	70-108						
PVG36_HSV11	HYPOTHETICAL GENE 36 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	94-135						
PVG37_HSV5A	HYPOTHETICAL GENE 37 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	36-74						
PVG38_HSV11	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	491-521						
PVG3R_AMEPV	HYPOTHETICAL G3R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	180-217						
PVG1_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	109-144						
PVG35_HSV11	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	13-46	190-226					
PVG39_HSV5A	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	151-185						
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	543-577	648-682					
PVG40_HSV5A	HYPOTHETICAL GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-216						
PVG41_HSV11	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45	202-233					
PVG42_HSV11	HYPOTHETICAL GENE 42 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	91-125						
PVG43_HSV11	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	109-140	157-185					
PVG46_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	888-935						
PVG48_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	339-357						
PVG50_HSV5A	PROBABLE TRANSCRIPTION ACTIVATOR EDR1	HERPESVIRUS SAIMIRI (STRAIN 11)	113-141						
PVG51_HSV11	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	29-64	84-120					
PVG52_HSV11	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	98-134						
PVG55_HSV11	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	100-139						
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	364-396	631-667	1091-1126				
PVG58_HSV11	HYPOTHETICAL GENE 58 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	342-375	480-508					
PVG58_HSV5A	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	25-60	195-233					
PVG59_HSV11	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	82-118						
PVG61_HSV11	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	76-109						
PVG64_HSV11	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	35-89	383-401	410-452				
PVG65_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	801-836	1146-1174	1290-1326				
PVG67_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	1150-1185						
PVG6_SPV1R	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	60-89						
PVG71_HSV5A	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	128-158						
PVG72_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	445-478	720-751	1158-1189	1232-1265			
PVG73_HSV11	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	263-291	387-422					

PUGLNC	FUNCTION	All Viruses (no bacteriophage)						
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
PVGIG_IISVII	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	187-211					
PVGI_SPVIR	GENE 7 PROTEIN	SPIROPLASMA VIRUS SPV1-ORF3 B	18-46					
PVGF1_IBVD	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	1718-1747	1836-1891	2108-2146	3601-3633		
PVGIII_HCMVA	GLYCOPROTEIN H (GP H) PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-115	157-185				
PVGL1_CVBF	E1 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	1259-1294					
PVGL2_CVNL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	651-681					
PVGL3_CVBLY	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	1259-1294					
PVGL3_CVBM	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEDUS)	1259-1294					
PVGL3_CVBQ	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	1259-1294					
PVGL3_CVBV	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	1259-1294					
PVGL3_CVH22	E3 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	1033-1088					
PVGL3_CVMH	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	1267-1304					
PVGL3_CVMA5	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59	1213-1252					
PVGL3_CVMJC	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM V VARIANT CL-2)	1267-1304					
PVGL3_CVMJH	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	1726-1763					
PVGL3_CVPFS	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	612-665	736-764	1228-1261			
PVGL3_CVPAU	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	612-665	736-764	1228-1261			
PVGL3_CVPPR	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	630-663	734-762	1226-1261			
PVGL3_CVPFU	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	630-663	734-762	1226-1261			
PVGL3_CVPRS	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS	512-545	1104-1139				
PVGL3_CVPRM	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RAM) (PRCV)	408-441	512-540	1104-1139			
PVGL3_CVPRT	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB	630-663	734-762	1226-1261			
PVGL1_FIPV	E1 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146) (FIPV)	633-668	739-767	1231-1266			
PVGL3_IBVB	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	133-188					
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-147	706-743				
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	116-147	707-744				
PVGLB_HSV6U	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-110					
PVGLD_HSV01	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	334-388					
PVGLD_HSV0J	GLYCOPROTEIN H-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN JUNIV) (BOVINE MAMMILLITIS VIRUS	743-776					
PVGLB_HSVDC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER	253-287					
PVGLB_HSV1G	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN GB) (ILTV)	442-472					
PVGLB_HSV1S	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2) (ILTV)	453-482					
PVGLB_ILTVT	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V992) (ILTV)	453-482					
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-161	738-776				
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	467-500					
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	467-500					
PVGLC_HSV1	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	433-465					
PVGLC_HSV2J	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	416-466					
PVGLC_HSVDC	GLYCOPROTEIN G (GP) PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-507					
PVGLC_VZVD	GLYCOPROTEIN G (GP)	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	331-368	513-548				
PVGLC_VZVS	GLYCOPROTEIN G (GP)	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT) (VZV)	331-368	513-548				
PVGLD_HSV2A	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AUS) (EHV-1)	340-370					
PVGLD_HSV1H	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-70	1700-420				
PVGLD_HSV1K	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-70	390-420				
PVGLE_HSV04	GLYCOPROTEIN E	EQUINE HERPESVIRUS TYPE 4	91-125					
PVGLE_HSVEB	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	61-100	390-420				
PVGLE_HSVEL	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	63-100	393-422				
PVGLE_PRVRI	GLYCOPROTEIN G (GP) PRECURSOR	PSEUDORABIES VIRUS (STRAIN BARTHA) (PRV)	112-169					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2) (HRS)	265-301	482-511				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN) (BRS)	484-513					
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94) (BRS)	484-513					
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	362-396					
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	484-513					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	484-513					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	484-513					
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	484-513					
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)	224-256	431-484				

PGENE	PIR:I12JP	All Viruses (no Bacteriophages)						
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN HP-1-CA	227-239	434-447				
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-236	431-444				
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-18	446-474				
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	446-474					
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	446-474					
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-18	446-474				
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45) (NDV)	112-165					
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LA/46) (NDV)	112-165					
PVGLF_PIIDV	FUSION GLYCOPROTEIN PRECURSOR	PIGOINE DISTEMPER VIRUS	511-565					
PVGLF_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-484					
PVGLF_PIIB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	453-481					
PVGLF_PIIH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885	453-481					
PVGLF_RUNDK	FUSION GLYCOPROTEIN PRECURSOR (	RINDERPEST VIRUS (STRAIN KADETE 0) (RDV)	226-252	447-480				
PVGLF_RUNDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L) (RDV)	220-252	447-480				
PVGLF_SEND2	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-488					
PVGLF_SEND3	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-488					
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-488					
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-488					
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-488					
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-488					
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	446-474					
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	433-461					
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	327-364					
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SONCHUS YELLOW NET VIRUS (SYNV)	524-553					
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	430-458					
PVGLG_VSVID	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	437-492					
PVGLG_VSVO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN ORSAY)	430-488					
PVGLG_VSVSJ	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	430-488					
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	691-719					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	690-718					
PVGLH_HSVG1	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN GS)	215-247	640-677				
PVGLH_HSVG4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4	814-850					
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1	807-843					
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-194					
PVGLH_HCMVA	IMMEDIATE EARLY GLYCOPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	197-227	418-468	982-1020	1049-1084		
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE 1.74)	190-220	344-381				
PVGLM_BUNGI	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	193-228	424-472	823-854			
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	244-271	637-677	886-915	933-965	1403-1441	
PVGLM_BUNGV	M POLYPROTEIN PRECURSOR	BUNGE VIRUS	610-641	1081-1119				
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN H-1) (KOREAN HEMORRHAGIC FEVER VIRUS)	188-222	613-643	1082-1120			
PVGLM_HANTJ	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN JOJO)	188-222	613-643	1083-1121			
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	188-222	613-643	1083-1121			
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	188-222	613-643	1083-1121			
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	269-307	1018-1062				
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS (PHV)	616-649	1084-1121				
PVGLM_PTV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	949-982	1273-1309				
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	620-653	1092-1125				
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	620-653	1092-1125				
PVGLN_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (RVFV)	620-650	830-863				
PVGLN_RVFVZ	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	620-650	830-863	1136-1185			
PVGLN_SEOUB	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	610-641	1081-1119				
PVGLN_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	609-641	1082-1120				
PVGLN_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11) (SAPPORO-RAT VIRUS)	610-641	1081-1119				
PVGLN_SEQUE	M POLYPROTEIN PRECURSOR	HANTAVIRUS (STRAIN HR)	431-468	966-993				
PVGLN_ULK	M POLYPROTEIN PRECURSOR	ULCINJ VIRUS (ULK)	1491-1526					
PVGLP_DEV	REPLICASE GLYCOPROTEIN PRECURSOR	DANE VIRUS (DEV)	12-45					
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	333-365					
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	318-354					
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)						

ACCESSION	FUNCTION	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILENAME	PROTEIN	VIRUS							
PVGLY_PIAKV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-30						
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-30						
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5	12-30	89-124					
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	12-30	89-124					
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11938)	12-30	89-124					
PVGNB_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS (CPMV)	1527-1555						
PVGNM_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS (CPMV)	209-242	741-771					
PVGNM_CPSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	50-86	479-515					
PVGNM_RCMV	GENOME POLYPROTEIN M	RED CLOVER MOTTLE VIRUS (RCMV)	766-799						
PVGP2_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111						
PVGP_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111						
PVH02_VACCC	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-89						
PVH02_VACCV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN WR)	54-89						
PVH02_VARV	LATE PROTEIN H2	VARIOLA VIRUS							
PVH03_VACCC	PROTEIN H3	VACCINIA VIRUS (STRAIN COPENHAGEN)	115-149						
PVH03_VACCV	PROTEIN H3	VACCINIA VIRUS (STRAIN WR)	115-149						
PVH03_VARV	PROTEIN H3	VARIOLA VIRUS	133-167						
PVHEL_LSV	PROBABLE HELICASE	LUMPY SKIN DISEASE VIRUS (LSV)	107-143						
PVH01_VACCC	PROTEIN H1	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-82						
PVH01_VARV	PROTEIN H1	VARIOLA VIRUS	54-82						
PVH04_VACCV	PROTEIN H4	VACCINIA VIRUS (STRAIN WR)	55-88						
PVH04_VARV	PROTEIN H4	VARIOLA VIRUS	55-88						
PVH09_VACCC	PUTATIVE RNA HELICASE H9	VACCINIA VIRUS (STRAIN COPENHAGEN)	591-624						
PVH09_VACCV	PUTATIVE RNA HELICASE H9	VACCINIA VIRUS (STRAIN WR)	591-624						
PVH09_VARV	PUTATIVE RNA HELICASE H9	VARIOLA VIRUS	591-624						
PVHEI_HCMVA	35 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	243-271						
PVHEI_HCMVT	35 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	243-271						
PVIB_BIV06	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 1026) (BIV)	42-78						
PVIB_BIV27	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	42-78						
PVIB_SIVGB	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	46-78						
PVIB_SIVMK	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (RAW ISOLATE) (SIV-MAC)	82-111						
PVINP_EBV	PROBABLE INTEGRAL MEMBRANE PROTEIN BORF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	125-159						
PVINP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169	68-100						
PVINP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	93-114	130-171	210-282				
PVINP_HSV1D	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	24-56	93-127	145-180	332-361			
PVINP_HSV5A	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-111						
PVINT_SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	253-291						
PVIN5_VACCC	PROTEIN I5	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-85						
PVIN5_VACCV	PROTEIN I5	VACCINIA VIRUS (STRAIN WR)	54-85						
PVIN5_VARV	PROTEIN I5	VARIOLA VIRUS	54-85						
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-120						
PVK04_VACCV	PROTEIN K4	VACCINIA VIRUS (STRAIN WR)	87-120						
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	74-107						
PVK05_VACCV	PROTEIN K5	VACCINIA VIRUS (STRAIN WR)	87-116						
PVL01_VACCC	PROTEIN L1	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-96						
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	59-76						
PVL01_VARV	PROTEIN L2	VARIOLA VIRUS	59-76						
PVL01_VACCC	PROTEIN L1	VACCINIA VIRUS (STRAIN COPENHAGEN)	292-322						
PVL01_VACCV	PROTEIN L1	VACCINIA VIRUS (STRAIN WR)	292-322						
PVL01_VARV	PROTEIN L1	VARIOLA VIRUS	291-321						
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	16-45						
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-45						
PVL1_HPV5B	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	373-406						
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS) (CRPV)	26-57						
PVL1_HPV05	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	27-57						
PVL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	27-57						
PVL1_HPV1A	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	26-56						

PGENE	PRODUCT	AH Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 2	AREA 1	AREA 1
ENTRY	PROTEIN	VIRUS	29-59	215-313				
PVL3_HPV39	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	29-59					
PVL3_HPV45	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	344-379					
PVL3_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	26-57					
PVL3_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	29-59					
PVL3_HPV51	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	27-57					
PVL3_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	29-59					
PVL3_HPVME	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	29-59					
PVL3_PCPVI	PROBABLE L2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	144-177	685-718				
PVL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	280-318	324-361				
PVRR1_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING	280-318					
PVRR1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	280-318					
PVRM2_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199					
PVRM2_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199					
PVRM2_REOVJ	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN D5/JONES)	168-199					
PVRM2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-199					
PVRM2_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	333-364					
PVRIA1_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	308-342					
PVRIA1_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	122-150					
PVRIE1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	64-102					
PVRIE1_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	64-102					
PVRIE1_CVMAS	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	65-101					
PVRIE1_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	65-101					
PVRIE1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS (TCV)	64-102					
PVRIE1_IBVD	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	73-101					
PVRIE1_IBVDJ	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE 1442) (IBV)	73-101					
PVRIEM_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	178-213					
PVNP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS (CERV)	93-126					
PVSIP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	68-98	273-303				
PVSA5_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SIANGHAI DUCK ISOLATE 55) (DHBV)	201-238	269-302				
PVSA5_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA) (DHBV)	194-227	268-301				
PVSA5_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (DHBV)	137-190	231-264				
PVSA5_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SIANGHAI DUCK ISOLATE 55) (DHBV)	194-228	269-302				
PVSA5_HPBDS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS (GSHV)	209-243	231-307				
PVSA5_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	159-193	236-269				
PVSA5_HPBVO	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	70-98					
PVSA5_HPBV1	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	244-272					
PVSA5_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	244-272					
PVSA5_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-272					
PVSA5_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	233-261					
PVSA5_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	70-98					
PVSA5_HPBV1	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-261					
PVSA5_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	233-261					
PVSA5_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH1 / CHIMPANZEE ISOLATE)	233-261					
PVSA5_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS D VIRUS (SUBTYPE ADR / STRAIN NC-1)	70-98					
PVSA5_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	233-261					
PVSA5_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PIDW294)	244-272					
PVSA5_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	70-98					
PVSA5_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	233-261					
PVSA5_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	233-261					
PVSA5_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	233-261					
PVSA5_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS D VIRUS (SUBTYPE AYW)	233-261					
PVSA5_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-241	269-303				
PVSA5_WHV19	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 19	212-246	274-310				
PVSA5_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-246	274-310				
PVSA5_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-246	274-310				
PVSA5_WHVB1	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	212-246	274-305				
PVSA5_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS33)	133-161					
PVMT3_IAZII	MATRIX (M2) PROTEIN	[illegible] VIRUS (STRAIN A/SWINE/IOWA/1/1[illegible])	10-42					

PCGENE	PJUCTJJP	All Viruses (no bacteriophage)						
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7
PVA1T8_MYXVL	M-T8 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	5-34	141-170					
PVA1T9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	246-282						
PVN01_VACCC	PROTEIN N2	VACCINIA VIRUS (STRAIN COPENHAGEN	31-68						
PVN01_VACCV	PROTEIN N2	VACCINIA VIRUS (STRAIN WR)	31-68						
PVN02_VARV	PROTEIN N2	VARIOLA VIRUS	31-68						
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	336-366						
PVNCA_AAV2	DNA REPLICATION PROTEIN	ADENO-ASSOCIATED VIRUS 2 (AAV2)	163-196	365-401					
PVNCS_PAVHO	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS (HPV)	180-217	346-377	379-411				
PVNS1_AIISV4	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	351-380						
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	114-144						
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	114-144						
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	114-144						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	107-144						
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	104-141						
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	107-144						
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	104-141						
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	104-141						
PVNS1_IAFON	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	114-144						
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	114-144						
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	107-144						
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	114-144						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	114-144						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/48/76)	107-144						
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	107-144						
PVNS1_IAN10	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/NANCHANG/933/95)	107-144						
PVNS1_IAN1Y	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/NYMEGEN/1/79)	104-141						
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	107-144						
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	107-144						
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	107-144						
PVNS1_IAPI5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	107-144						
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	114-144						
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-8/83)	107-144						
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	103-144						
PVNS1_IATR5	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	104-141						
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	107-144						
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	114-144						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	114-144						
PVNS1_IAZII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	107-144						
PVNS1_IVBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/AA/79)	266-295						
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-255						
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-255						
PVNS2_IIRSV1	NONSTRUCTURAL PROTEIN 2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	20-49						
PVNS2_IIRSVA	NONSTRUCTURAL PROTEIN 2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	20-49						
PVNS2_IVBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40	48-77						
PVNS2_IVBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	48-77						
PVNS4_CVM45	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-45						
PVNS4_CVPF5	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS7)	4-34						
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR	4-39						
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS	4-39						
PVNST_CVMA5	30 KD NONSTRUCTURAL PROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	45-80						
PVNST_CVMHH	30 KD NONSTRUCTURAL PROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	49-84						
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-255						
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-255						
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-255						
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/1/81)	222-255						
PVNUC_PVPKA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	756-784						
PVNUC_IIIVH1	NUCLEOPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS (STRAIN INDIAN / 1110-1) (HIV-1)	391-431	441-480					

PCGENE	PIRCTLZIP	All Viruses (no bacteriophage(s))	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
FILE NAME	PROTEIN	VIRUS	334-388					
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/83)	334-388					
PVNUC_IAULO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	334-388					
PVNUC_IAUPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	334-388					
PVNUC_IAUTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/46)	334-388					
PVNUC_MABVKI	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN KUSOKE)	16-46					
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-46					
PVO01_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	511-539	550-581				
PVO01_VARV	PROTEIN O1	VARIOLA VIRUS	511-539					
PVOR1_NAIV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NAIV)	121-150	641-671				
PVOR1_PVAIR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	1667-1703					
PVOR1_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYEAV)	121-153					
PVP03_HSVSA	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	462-493					
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	4-38					
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA NUCLEOCAPSID POLYHEDROSIS VIRUS (OPNPV)	4-38					
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	260-291					
PVP19_HSVEB	CAPSID ASSEMBLY AND DNA MATURATION PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	239-268	287-323				
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-172					
PVP23_HSVAU	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	46-79	206-238				
PVP23_HSVEB	PROBABLE CAPSID PROTEIN VP23	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	18-48					
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	224-253					
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	408-441					
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	649-681					
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	558-586	649-681				
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	391-424	564-593				
PVP2_BTVIA	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	614-648					
PVP2_BTVIS	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	614-648					
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	878-915					
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	334-367	522-553				
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	334-367	522-558				
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	142-177	532-563				
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	514-549	589-617	811-841			
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	335-368	533-558				
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-311					
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-311					
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-312					
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA NUCLEOCAPSID POLYHEDROSIS VIRUS (OPNPV)	107-141					
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	381-412	734-770				
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	381-412	734-770				
PVP7_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	291-330					
PVP81_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	652-688					
PVP10_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	439-457					
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	119-152					
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882) (ILTV)	84-119					
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV	485-516					
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	239-270					
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	533-591					
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	533-591					
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	534-592					
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP D / STRAIN IDIR)	91-122	468-499				
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	278-308	624-659				
PVP5_BRD	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	96-133	295-326				
PVP5_BTVIA	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	193-224					
PVP5_BTVIS	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-324					
PVP5_BTVU4	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	195-224					
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	296-325					
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	691-719					
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	159-187					

PCGENE	P2SCTLZIP	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	155-183	210-245				
PVP62_RRDV	PROBABLE NONSTRUCTURAL 36 3 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (MRDV)	21-61	222-257				
PVP64_NPVOP	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPNPV)	285-313					
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	281-316					
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GMNPV)	198-233					
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	155-183					
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	159-187					
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	131-159					
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	180-209					
PVP6_WTV	STRUCTURAL PROTEIN P6.	WOUND TUMOR VIRUS (WTV)	180-209					
PVP6_WTVNI	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NI) (WTV)	403-442					
PVP79_NIVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	454-490					
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS (WTV)	77-112					
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPNPV)	77-112					
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-139					
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-139					
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-139					
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-139					
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-139					
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-139					
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-139					
PVP8_RDV	OUTER CAPSID PROTEIN P8	RICE DWARF VIRUS (RDV)	374-412					
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS (WTV)	164-195	379-412				
PVP8E_NPVAC	39 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	145-173					
PVP8E_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPNPV)	122-151					
PVPR_HIV1A2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	37-74					
PVPR_HIV1BE	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN) (HIV-2)	41-73					
PVPR_HIV1CA	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	41-73					
PVPR_HIV1D1	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194) (HIV-2)	41-73					
PVPR_HIV1D2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205) (HIV-2)	41-73					
PVPR_HIV1N2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	41-73					
PVPR_HIV1RO	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	41-73					
PVPR_HIV1S1	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL6669) (HIV-2)	41-73					
PVPR_HIV1SI	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST) (HIV-2)	40-72					
PVPR_HIV1SY	VPR PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	37-74					
PVPR_SIVCZ	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE) (SIV-MAC)	37-69					
PVPR_SIVK1	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	37-69					
PVPR_SIVK1K	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W/K1 ISOLATE) (SIV-MAC)	37-69					
PVPR_SIVK1L	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/DCC1) ISOLATE) (SOOTY MANGABEY)	37-69					
PVPR_SIVSP	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BIHO ISOLATE, HXB3 ISOLATE)	37-73					
PVPU_HIV1D1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (D1H1 ISOLATE) (HIV-1)	4-33					
PVPU_HIV1D8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (D1H8 ISOLATE) (HIV-1)	3-34					
PVPU_HIV1EN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (HIV-1)	3-33					
PVPU_HIV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	4-33					
PVPU_HIV1IR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (HIV-1)	3-34					
PVPU_HIV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HIV-1)	3-33					
PVPU_ISMV	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	116-154					
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS (LDV)	25-55					
PVPY_BIV2	ORF-Y PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	35-71					
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-319	676-705				
PVS01_ROTJU	NONSTRUCTURAL PROTEIN NCVP2	HUMAN ROTAVIRUS (STRAIN IGV-40-3)	198-230					
PVS05_ROTSC	NONSTRUCTURAL PROTEIN NS53	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	88-119	358-392				
PVS05_ROTSI	NONSTRUCTURAL PROTEIN NCVP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	315-347					
PVS06_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	55-92					
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-92	313-340				
PVS06_ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	55-92					

PCGENE FILENAME	PIRCLIP PROTEIN	All Viruses (no bacteriophages) VIRUS	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	55-93						
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	55-93						
PVS06_ROTHI	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	55-93						
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-92	112-140					
PVS06_ROTHI5	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	55-93						
PVS06_ROTHIW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	55-92	113-149					
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN	64-92						
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	55-93	113-149					
PVS06_ROTSI	VP6 PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-93	113-149					
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	234-302						
PVS09_ROTHT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	131-159						
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	131-159						
PVS10_ROTBN	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN NCDV)	52-89						
PVS10_ROTBU	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	52-89						
PVS10_ROTHI	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A2)	52-89						
PVS10_ROTHI7	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	52-89						
PVS10_ROTHI8	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6	52-89						
PVS10_ROTHW	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	52-89						
PVS10_ROTSI	NONSTRUCTURAL GLYCOPROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	52-89						
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	99-110						
PVS11_REOVI	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DS/JONES)	146-184						
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-141						
PVT1_SFVKA	PROTEIN T1 PRECURSOR	SHOPE FIBROMA VIRUS (STRAIN KASZAT (SFV)	147-182						
PVT3_MYXVL	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	MYXOMA VIRUS (STRAIN LAUSANNE)	261-290						
PVT3_SFVKA	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	SHOPE FIBROMA VIRUS (STRAIN KASZAT (SFV)	211-249						
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	116-150						
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	166-199	305-343					
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-209						
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	TETALURID HERPESVIRUS 1 (CHANNEL CATFISH1 VIRUS) (CCV)	156-188						
PVX_SENDG	X PROTEIN	SENDAI VIRUS (STRAIN 694)	37-93						
PY104_ADE07	HYPOTHETICAL 104 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	55-83						
PY10K_MSVS	HYPOTHETICAL 109 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE) (MSV)	24-54						
PY10K_WDV	HYPOTHETICAL 108 KD PROTEIN	WHEAT DWARF VIRUS (WDV)	22-59						
PY119_SSV1	HYPOTHETICAL 119 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	29-64						
PY11K_PASV	HYPOTHETICAL 119 KD PROTEIN (ORF VI)	PANICUM STREAK VIRUS	29-61						
PY11K_ROTSI	HYPOTHETICAL 11 KD PROTEIN IN SEGMENT 5 11	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	53-81						
PY11K_TYDVA	HYPOTHETICAL 11 1 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	28-62						
PY14K_NPVAC	HYPOTHETICAL 13 8 KD PROTEIN IN 39 KD PROTEIN 3 REC	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	65-101						
PY18K_SSV1	HYPOTHETICAL 18 0 KD PROTEIN (ORF B-146)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	106-132						
PY20K_SSV1	HYPOTHETICAL 20 4 KD PROTEIN (ORF E-178)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	139-163						
PY21K_MSVN	HYPOTHETICAL 21 7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE) (MSV)	132-155						
PY2_SOCMV	HYPOTHETICAL PROTEIN 2 (ORF II)	SOYBEAN CHLOROTIC MOTTLE VIRUS	99-131						
PY34K_NPVAC	HYPOTHETICAL 37 7 KD PROTEIN (ORF3)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	210-282						
PY35K_SSV1	HYPOTHETICAL 35 7 KD PROTEIN (ORF C-792)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	274-312	393-580					
PY8II_FOWPM	HYPOTHETICAL BAMII-ORF13 PROTEIN (FRAGMENT)	FOWLPOX VIRUS (ISOLATE HP-438 (MUNICH))	114-130						
PYDIII_HSVSC	HYPOTHETICAL 28 7 KD PROTEIN IN DIFF REGION (ORF	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-244						
PYDIII_HSVSC	HYPOTHETICAL 9 3 KD PROTEIN IN DIFF REGION (ORF3	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-97						
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	34-68						
PYI01_CVBM	HYPOTHETICAL PROTEIN 1ORF1	BOVINE CORONAVIRUS	84-122						
PYI0R_CVBM	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (1ORF)	BOVINE CORONAVIRUS (STRAIN F15)	41-73	137-163					
PYI0R_CVBM	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (1ORF)	BOVINE CORONAVIRUS (STRAIN MEBUS)	41-74	137-163					
PYI0R_CVTKE	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (1ORF)	TURKEY ENTERIC CORONAVIRUS (TCV)	41-74	137-165					
PYKA1_EBV	HYPOTHETICAL BKRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-100						
PYKA1_EBV	BKRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	230-284						
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN (ORF1)	CONSOLINA YELLOW MOTTLE VIRUS (COYMV)	93-130	166-198					
PYOR3_COYMV	HYPOTHETICAL 15 KD PROTEIN (ORF2)	CONSOLINA YELLOW MOTTLE VIRUS (COYMV)	23-56						
PYOR3_PVXXC	HYPOTHETICAL 12 KD PROTEIN (ORF 3) (FRAGMENT)	POTATO VIRUS X (STRAIN XC) (PVX)	7-39						

PCGENE	PJUCTL2IP	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
ELLA NAME	PROTEIN	VIRUS							
PYOR1_WCMVM	HYPOTHETICAL 13 KD PROTEIN (ORF 1)	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	63-94						
PYOR2_WCMVO	HYPOTHETICAL 13 KD PROTEIN (ORF 2)	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	64-95						
PYOR3_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN (ORF 3)	AVIAN ADENOVIRUS GAL1	237-272						
PYOR4_TTV1	HYPOTHETICAL 7.1 KD PROTEIN	TTIERNOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	5-34						
PYOR4_TTV1	HYPOTHETICAL 38.6 KD PROTEIN	TTIERNOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	233-263						
PYORP_TTV1	HYPOTHETICAL 20.2 KD PROTEIN	TTIERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	91-124						
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN (ORF 1	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	104-133	159-191					
PYP24_RTDVP	HYPOTHETICAL P24 PROTEIN (ORF 1)	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTDV)	104-133	159-191					
PYP47_NPVAC	HYPOTHETICAL 47.5 KD PROTEIN IN P47 3'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	23-51.						
PYRF5_HSV6G	HYPOTHETICAL PROTEIN RF5	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	180-216						
PYR82_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	13-42						
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	92-120						
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	106-136						
PYVAE_VACCC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-53						
PYVAJ_VACCV	HYPOTHETICAL 9.9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	21-49						
PYVBC_VACCC	HYPOTHETICAL 10.8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-53						
PYVDJ_VACCV	HYPOTHETICAL 10.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	31-64.						
PYVEF_VACCC	HYPOTHETICAL 12.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	6-42						
PYVFL_VACCC	HYPOTHETICAL 11.6 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-35.						
PZNF1_LYCVA	ZINC FINGER PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	29-57						
PZNF1_LYCVP	ZINC FINGER PROTEIN (FRAGMENT)	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN PASTEUR)	8-32						

TABLE XV
RESPIRATORY SYNCYTIAL VIRUS DP107 F2 REGION ANALOG
CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSV-Z
X-YTSVI-Z
X-YTSVIT-Z
X-YTSVITI-Z
X-YTSVITIE-Z
X-YTSVITIEL-Z
X-YTSVITIELS-Z
X-YTSVITIELSN-Z
X-YTSVITIELSNI-Z
X-YTSVITIELSNIK-Z
X-YTSVITIELSNIKE-Z
X-YTSVITIELSNIKEN-Z
X-YTSVITIELSNIKENK-Z
X-YTSVITIELSNIKENKC-Z
X-YTSVITIELSNIKENKCN-Z
X-YTSVITIELSNIKENKCNG-Z
X-YTSVITIELSNIKENKCNGT-Z
X-YTSVITIELSNIKENKCNGTD-Z
X-YTSVITIELSNIKENKCNGTDA-Z
X-YTSVITIELSNIKENKCNGTDAK-Z
X-YTSVITIELSNIKENKCNGTDAKV-Z
X-YTSVITIELSNIKENKCNGTDAKVK-Z
X-YTSVITIELSNIKENKCNGTDAKVKL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLI-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELD-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKY-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVT-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLM-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQS-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.
Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVI

RESPIRATORY SYNCYTIAL VIRUS F2 DP178/DP107 REGION ANALOG AMINO TRUNCATIONS

X-QST-Z
X-MQST-Z
X-LMQST-Z
X-LLMQST-Z
X-QLLMQST-Z
X-LQLLMQST-Z
X-ELQLLMQST-Z
X-TELQLLMQST-Z
X-VTELQLLMQST-Z
X-AVTELQLLMQST-Z
X-NAVTELQLLMQST-Z
X-KNAVTELQLLMQST-Z
X-YKNAVTELQLLMQST-Z
X-KYKNAVTELQLLMQST-Z
X-DKYKNAVTELQLLMQST-Z
X-LDKYKNAVTELQLLMQST-Z
X-ELDKYKNAVTELQLLMQST-Z
X-QELDKYKNAVTELQLLMQST-Z
X-KQELDKYKNAVTELQLLMQST-Z
X-IKQELDKYKNAVTELQLLMQST-Z
X-LIKQELDKYKNAVTELQLLMQST-Z
X-KLIKQELDKYKNAVTELQLLMQST-Z
X-VKLIKQELDKYKNAVTELQLLMQST-Z
X-KVKLIKQELDKYKNAVTELQLLMQST-Z
X-AKVKLIKQELDKYKNAVTELQLLMQST-Z
X-DAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-GTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-CNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-LSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG CARBOXY TRUNCATIONS

X-FYD-Z
X-FYDP-Z
X-FYDPL-Z
X-FYDPLV-Z
X-FYDPLVF-Z
X-FYDPLVFP-Z
X-FYDPLVFPS-Z
X-FYDPLVFPSD-Z
X-FYDPLVFPSDE-Z
X-FYDPLVFPSDEF-Z
X-FYDPLVFPSDEFD-Z
X-FYDPLVFPSDEFDA-Z
X-FYDPLVFPSDEFDAS-Z
X-FYDPLVFPSDEFDASI-Z
X-FYDPLVFPSDEFDASIS-Z
X-FYDPLVFPSDEFDASISQ-Z
X-FYDPLVFPSDEFDASISQV-Z
X-FYDPLVFPSDEFDASISQVN-Z
X-FYDPLVFPSDEFDASISQVNE-Z
X-FYDPLVFPSDEFDASISQVNEK-Z
X-FYDPLVFPSDEFDASISQVNEKI-Z
X-FYDPLVFPSDEFDASISQVNEKIN-Z
X-FYDPLVFPSDEFDASISQVNEKINQ-Z
X-FYDPLVFPSDEFDASISQVNEKINQS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLA-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAF-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFI-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIR-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRK-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSD-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDE-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDEL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVIII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG AMINO TRUNCATIONS

X-DELL-Z
X-SDELL-Z
X-KSDELL-Z
X-RKSDELL-Z
X-IRKSDELL-Z
X-FIRKSDELL-Z
X-AFIRKSDELL-Z
X-LAFIRKSDELL-Z
X-SLAFIRKSDELL-Z
X-QSLAFIRKSDELL-Z
X-NQSLAFIRKSDELL-Z
X-INQSLAFIRKSDELL-Z
X-KINQSLAFIRKSDELL-Z
X-EKINQSLAFIRKSDELL-Z
X-NEKINQSLAFIRKSDELL-Z
X-VNEKINQSLAFIRKSDELL-Z
X-QVNEKINQSLAFIRKSDELL-Z
X-SQVNEKINQSLAFIRKSDELL-Z
X-ISQVNEKINQSLAFIRKSDELL-Z
X-SISQVNEKINQSLAFIRKSDELL-Z
X-ASISQVNEKINQSLAFIRKSDELL-Z
X-DASISQVNEKINQSLAFIRKSDELL-Z
X-FDASISQVNEKINQSLAFIRKSDELL-Z
X-EFDASISQVNEKINQSLAFIRKSDELL-Z
X-DEFDASISQVNEKINQSLAFIRKSDELL-Z
X-SDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-FPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-VFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-LVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-DPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-YDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XIX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG CARBOXY TRUNCATIONS

X-ITL-Z
X-ITLN-Z
X-ITLNN-Z
X-ITLNNS-Z
X-ITLNNSV-Z
X-ITLNNSVA-Z
X-ITLNNSVAL-Z
X-ITLNNSVALD-Z
X-ITLNNSVALDP-Z
X-ITLNNSVALDPI-Z
X-ITLNNSVALDPID-Z
X-ITLNNSVALDPIDI-Z
X-ITLNNSVALDPIDIS-Z
X-ITLNNSVALDPIDISI-Z
X-ITLNNSVALDPIDISIE-Z
X-ITLNNSVALDPIDISIEL-Z
X-ITLNNSVALDPIDISIELN-Z
X-ITLNNSVALDPIDISIELNK-Z
X-ITLNNSVALDPIDISIELNKA-Z
X-ITLNNSVALDPIDISIELNKAK-Z
X-ITLNNSVALDPIDISIELNKAKS-Z
X-ITLNNSVALDPIDISIELNKAKSD-Z
X-ITLNNSVALDPIDISIELNKAKSDL-Z
X-ITLNNSVALDPIDISIELNKAKSDLE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEES-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESK-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEW-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWI-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
AMINO TRUNCATIONS

X-RRS-Z
X-IRRS-Z
X-WIRRS-Z
X-EWIRRS-Z
X-KEWIRRS-Z
X-SKEWIRRS-Z
X-ESKEWIRRS-Z
X-EESKEWIRRS-Z
X-LEESKEWIRRS-Z
X-DLEESKEWIRRS-Z
X-SDLEESKEWIRRS-Z
X-KSDLEESKEWIRRS-Z
X-AKSDLEESKEWIRRS-Z
X-KAKSDLEESKEWIRRS-Z
X-NKAKSDLEESKEWIRRS-Z
X-LNKAKSDLEESKEWIRRS-Z
X-ELNKAKSDLEESKEWIRRS-Z
X-IELNKAKSDLEESKEWIRRS-Z
X-SIELNKAKSDLEESKEWIRRS-Z
X-ISIELNKAKSDLEESKEWIRRS-Z
X-DISIELNKAKSDLEESKEWIRRS-Z
X-IDISIELNKAKSDLEESKEWIRRS-Z
X-PIDISIELNKAKSDLEESKEWIRRS-Z
X-DPIDISIELNKAKSDLEESKEWIRRS-Z
X-LDPIDISIELNKAKSDLEESKEWIRRS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXI
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG CARBOXY TRUNCATIONS

X-ALG-Z
X-ALGV-Z
X-ALGVA-Z
X-ALGVAT-Z
X-ALGVATS-Z
X-ALGVATSA-Z
X-ALGVATSAQ-Z
X-ALGVATSAQI-Z
X-ALGVATSAQIT-Z
X-ALGVATSAQITA-Z
X-ALGVATSAQITAA-Z
X-ALGVATSAQITAAV-Z
X-ALGVATSAQITAAVA-Z
X-ALGVATSAQITAAVAL-Z
X-ALGVATSAQITAAVALV-Z
X-ALGVATSAQITAAVALVE-Z
X-ALGVATSAQITAAVALVEA-Z
X-ALGVATSAQITAAVALVEAK-Z
X-ALGVATSAQITAAVALVEAKQ-Z
X-ALGVATSAQITAAVALVEAKQA-Z
X-ALGVATSAQITAAVALVEAKQAR-Z
X-ALGVATSAQITAAVALVEAKQARS-Z
X-ALGVATSAQITAAVALVEAKQARSD-Z
X-ALGVATSAQITAAVALVEAKQARSDI-Z
X-ALGVATSAQITAAVALVEAKQARSDIE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKL-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEA-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAI-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAIR-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXII
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG AMINO TRUNCATIONS

X-IRD-Z
X-AIRD-Z
X-EAIRD-Z
X-KEAIRD-Z
X-LKEAIRD-Z
X-KLKEAIRD-Z
X-EKLKEAIRD-Z
X-IEKLKEAIRD-Z
X-DIEKLKEAIRD-Z
X-SDIEKLKEAIRD-Z
X-RSDIEKLKEAIRD-Z
X-ARSDIEKLKEAIRD-Z
X-QARSDIEKLKEAIRD-Z
X-KQARSDIEKLKEAIRD-Z
X-AKQARSDIEKLKEAIRD-Z
X-EAKQARSDIEKLKEAIRD-Z
X-VEAKQARSDIEKLKEAIRD-Z
X-LVEAKQARSDIEKLKEAIRD-Z
X-ALVEAKQARSDIEKLKEAIRD-Z
X-VALVEAKQARSDIEKLKEAIRD-Z
X-AVALVEAKQARSDIEKLKEAIRD-Z
X-AAVALVEAKQARSDIEKLKEAIRD-Z
X-TAAVALVEAKQARSDIEKLKEAIRD-Z
X-ITAAVALVEAKQARSDIEKLKEAIRD-Z
X-QITAAVALVEAKQARSDIEKLKEAIRD-Z
X-AQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-SAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-TSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-ATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-VATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-GVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-LGVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXIII

REPRESENTATIVE DP107/DP178 ANALOG ANTIVIRAL PEPTIDES

Anti-Respiratory syncytial virus peptides

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z

Anti-human parainfluenza virus 3 peptides

X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRSN-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRSNQ-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRSNQK-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRSNQKL-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRSNQKLD-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRSNQKLDS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRSNQKLDSI-Z
X-LDPIDISIELNKAKSDLEESKEWIRRSNQKLDSIG-Z
X-DPIDISIELNKAKSDLEESKEWIRRSNQKLDSIGN-Z
X-PIDISIELNKAKSDLEESKEWIRRSNQKLDSIGNW-Z
X-IDISIELNKAKSDLEESKEWIRRSNQKLDSIGNWH-Z
X-DISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQ-Z
X-ISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQS-Z
X-SIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSS-Z
X-IELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSST-Z
X-ELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSSTT-Z
X-TAAVALVEAKQARSDIEKLKEAIRDTNKAVQSVQS-Z

X-AVALVEAKQARSDIEKLKEAIRDTNKAVQSVQSSI-Z
X-LVEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNL-Z
X-VEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLI-Z
X-EAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIV-Z
X-AKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVA-Z
X-KQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAI-Z
X-QARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIK-Z
X-ARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKS-Z
X-RSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSV-Z
X-SDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQ-Z
X-KLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVN-Z
X-LKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNK-Z
X-AIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNKEIV-Z

Anti-simian immunodeficiency virus peptides

X-WQEWERKVDFLEENITALLEEAQIQQEKNMYELQK-Z
X-QEWERKVDFLEENITALLEEAQIQQEKNMYELQKL-Z
X-EWERKVDFLEENITALLEEAQIQQEKNMYELQKLN-Z
X-WERKVDFLEENITALLEEAQIQQEKNMYELQKLNS-Z
X-ERKVDFLEENITALLEEAQIQQEKNMYELQKLNSW-Z
X-RKVDFLEENITALLEEAQIQQEKNMYELQKLNSWD-Z
X-KVDFLEENITALLEEAQIQQEKNMYELQKLNSWDV-Z
X-VDFLEENITALLEEAQIQQEKNMYELQKLNSWDVF-Z
X-DFLEENITALLEEAQIQQEKNMYELQKLNSWDVFG-Z
X-FLEENITALLEEAQIQQEKNMYELQKLNSWDVFGN-Z

Anti-measles virus peptides

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEAKELL-Z
X-HRIDLGPPISLERLDVGTNLGNAIAKLEAKELLE-Z
X-RIDLGPPISLERLDVGTNLGNAIAKLEAKELLES-Z
X-IDLGPPISLERLDVGTNLGNAIAKLEAKELLESS-Z
X-DLGPPISLERLDVGTNLGNAIAKLEAKELLESSD-Z
X-LGPPISLERLDVGTNLGNAIAKLEAKELLESSDQ-Z
X-GPPISLERLDVGTNLGNAIAKLEAKELLESSDQI-Z
X-PPISLERLDVGTNLGNAIAKLEAKELLESSDQIL-Z
X-PISLERLDVGTNLGNAIAKLEAKELLESSDQILR-Z
X-SLERLDVGTNLGNAIAKLEAKELLESSDQILRSM-Z
X-LERLDVGTNLGNAIAKLEAKELLESSDQILRSMK-Z

The one letter amino acid code is used.
Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.
"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

5.4. SYNTHESIS OF PEPTIDES

[0133] The peptides of the invention may be synthesized or prepared by techniques well known in the art. See, for example, Creighton, 1983, Proteins: Structures and Molecular Principles, W.H. Freeman and Co., NY, which is incorporated herein by reference in its entirety. Short peptides, for example, can be synthesized on a solid support or in

solution. Longer peptides may be made using recombinant DNA techniques. Here, the nucleotide sequences encoding the peptides of the invention may be synthesized, and/or cloned, and expressed according to techniques well known to those of ordinary skill in the art. See, for example, Sambrook, et al., 1989, Molecular Cloning, A Laboratory Manual, Vols. 1-3, Cold Spring Harbor Press, NY.

[0134] The peptides of the invention may alternatively be synthesized such that one or more of the bonds which link the amino acid residues of the peptides are non-peptide bonds. These alternative non-peptide bonds may be formed by utilizing reactions well known to those in the art, and may include, but are not limited to imino, ester, hydrazide, semicarbazide, and azo bonds, to name but a few. In yet another embodiment of the invention, peptides comprising the sequences described above may be synthesized with additional chemical groups present at their amino and/or carboxy termini, such that, for example, the stability, bioavailability, and/or inhibitory activity of the peptides is enhanced. For example, hydrophobic groups such as carbobenzoxyl, dansyl, or t-butyloxycarbonyl groups, may be added to the peptides' amino termini. Likewise, an acetyl group or a 9-fluorenylmethoxy-carbonyl group may be placed at the peptides' amino termini. (See "X" in Tables I to IV, above.) Additionally, the hydrophobic group, t-butyloxycarbonyl, or an amido group may be added to the peptides' carboxy termini. (See "Z" in Tables I to IV, above.)

[0135] Further, the peptides of the invention may be synthesized such that their steric configuration is altered. For example, the D-isomer of one or more of the amino acid residues of the peptide may be used, rather than the usual L-isomer.

[0136] Still further, at least one of the amino acid residues of the peptides of the invention may be substituted by one of the well known non-naturally occurring amino acid residues. Alterations such as these may serve to increase the stability, bioavailability and/or inhibitory action of the peptides of the invention.

[0137] Any of the peptides described above may, additionally, have a macromolecular carrier group covalently attached to their amino and/or carboxy termini. Such macromolecular carrier groups may include, for example, lipid-fatty acid conjugates, polyethylene glycol, carbohydrates or additional peptides. "X", in Tables I to IV, above, may therefore additionally represent any of the above macromolecular carrier groups covalently attached to the amino terminus of a peptide, with an additional peptide group being preferred. Likewise, "Z", in Tables I to IV, may additionally represent any of the macromolecular carrier groups described above.

5.5. ASSAYS FOR ANTI-MEMBRANE FUSION ACTIVITY

[0138] Described herein, are methods for ability of a compound, such as the peptides of the invention, to inhibit membrane fusion events. Specifically, assays for cell fusion events are described in Section 5.5.1, below, and assays for antiviral activity are described in Section 5.5.2, below.

5.5.1 ASSAYS FOR CELL FUSION EVENTS

[0139] Assays for cell fusion events are well known to those of skill in the art, and may be used in conjunction, for example, with the peptides of the invention to test the peptides' antifusogenic capabilities.

[0140] Cell fusion assays are generally performed in vitro. Such an assay may comprise culturing cells which, in the absence of any treatment would undergo an observable level of syncytial formation. For example, uninfected cells may be incubated in the presence of cells chronically infected with a virus that induces cell fusion. Such viruses may include, but are not limited to, HIV, SIV, or respiratory syncytial virus.

[0141] For the assay, cells are incubated in the presence of a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added.

[0142] Standard conditions for culturing cells, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytial formation. Well known stains, such as crystal violet stain, may be used to facilitate the visualization of syncytial formation.

5.5.2 ASSAYS FOR ANTIVIRAL ACTIVITY

[0143] The antiviral activity exhibited by the peptides of the invention may be measured, for example, by easily performed in vitro assays, such as those described below, which can test the peptides' ability to inhibit syncytia formation, or their ability to inhibit infection by cell-free virus. Using these assays, such parameters as the relative antiviral activity of the peptides, exhibit against a given strain of virus and/or the strain specific inhibitory activity of the peptide can be determined.

[0144] A cell fusion assay may be utilized to test the peptides' ability to inhibit viral-induced, such as HIV-induced, syncytia formation in vitro. Such an assay may comprise culturing uninfected cells in the presence of cells chronically infected with a syncytial-inducing virus and a peptide to be assayed. For each peptide, a range of peptide concentrations

may be tested. This range should include a control culture wherein no peptide has been added. Standard conditions for culturing, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytia formation. Well known stains, such as crystal violet stain, may be used to facilitate syncytial visualization. Taking HIV as an example, such an assay would comprise CD-4$^+$ cells (such as Molt or CEM cells, for example) cultured in the presence of chronically HIV-infected cells and a peptide to be assayed.

[0145] Other well known characteristics of viral infection may also be assayed to test a peptide's antiviral capabilities. Once again taking HIV as an example, a reverse transcriptase (RT) assay may be utilized to test the peptides' ability to inhibit infection of CD-4$^+$ cells by cell-free HIV. Such an assay may comprise culturing an appropriate concentration (i.e., $TCID_{50}$) of virus and CD-4$^+$ cells in the presence of the peptide to be tested. Culture conditions well known to those in the art are used. As above, a range of peptide concentrations may be used, in addition to a control culture wherein no peptide has been added. After incubation for an appropriate period (e.g., 7 days) of culturing, a cell-free supernatant is prepared, using standard procedures, and tested for the present of RT activity as a measure of successful infection. The RT activity may be tested using standard techniques such as those described by, for example, Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and/or Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). These references are incorporated herein by reference in their entirety.

[0146] Standard methods which are well-known to those of skill in the art may be utilized for assaying non-retroviral activity. See, for example, Pringle et al. (Pringle, C.R. et al., 1985, J. Medical Virology 17:377-386) for a discussion of respiratory syncytial virus and parainfluenza virus activity assay techniques. Further, see, for example, "Zinsser Microbiology", 1988, Joklik, W.K. et al., eds., Appleton & Lange, Norwalk, CT, 19th ed., for a general review of such techniques. These references are incorporated by reference herein in their entirety. In addition, the Examples presented below, in Sections 17, 18, 26 and 27 each provide additional assays for the testing of a compound's antiviral capability.

[0147] In vivo assays may also be utilized to test, for example, the antiviral activity of the peptides of the invention. To test for anti-HIV activity, for example, the in vivo model described in Barnett et al. (Barnett, S.W. et al., 1994, Science 266:642-646) may be used. Additionally, anti-RSV activity can be assayed in vivo via well known mouse models. For example, RSV can be administered intranasally to mice of various inbred strains. Virus replicates in lungs of all strains, but the highest titers are obtained in P/N, C57L/N and DBA/2N mice. Infection of BALB/c mice produces an asymptomatic bronchiolitis characterized by lymphocytic infiltrates and pulmonary virus titers of 10^4 to 10^5 pfu/g of lung tissue (Taylor, G. et al., 1984, Infect. Immun. 43:649-655).

[0148] Cotton rat models of RSV are also well known. Virus replicates to high titer in the nose and lungs of the cotton rat but produces few if any signs of inflammation.

5.6. USES OF THE PEPTIDES OF THE INVENTION

[0149] The peptides of the invention may be utilized as antifusogenic or antiviral compounds, or as compounds which modulate intracellular processes involving coiled coil peptide structures. Further, such peptides may be used to identify agents which exhibit antifusogenic, antiviral or intracellular modulatory activity. Still further, the peptides of the invention may be utilized as organism or viral type/subtype-specific diagnostic-tools.

[0150] The antifusogenic capability of the peptides of the invention may additionally be utilized to inhibit or treat/Ameliorate symptoms caused by processes involving membrane fusion events. Such events may include, for example, virus transmission via cell-cell fusion, abnormal neurotransmitter exchange via cell-fusion, and sperm-egg fusion. Further, the peptides of the invention may be used to inhibit free viral, such as retroviral, particularly HIV, transmission to uninfected cells wherein such viral infection involves membrane fusion events or involves fusion of a viral structure with a cell membrane. Among the intracellular disorders involving coiled coil peptides structures which may be ameliorated by the peptides of the invention are disorders involving, for example, bacterial toxins.

[0151] With respect to antiviral activity, the viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to all strains of the viruses listed above, in Tables V through VII, and IX through XIV.

[0152] These viruses include, for example, human retroviruses, particularly HIV-1 and HIV-2 and the human T-lymphocyte viruses (HTLV-I and II). The non-human retroviruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to bovine leukosis virus, feline sarcoma and leukemia viruses, simian immunodeficiency, sarcoma and leukemia viruses, and sheep progress pneumonia viruses.

[0153] Non retroviral viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to human respiratory syncytial virus, canine distemper virus, newcastle disease virus, human parainfluenza virus, influenza viruses, measles viruses, Epstein-Barr viruses, hepatitis B viruses, and simian Mason-Pfizer viruses.

[0154] Non enveloped viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to picornaviruses such as polio viruses, hepatitis A virus, enterovirus, echoviruses and coxsackie viruses, papovaviruses such as papilloma virus, parvoviruses, adenoviruses and reoviruses.

[0155] As discussed more fully, below, in Section 5.5.1 and in the Example presented, below, in Section 8, DP107,

DP178, DP107 analog and DP178 analog peptides form non-covalent protein-protein interactions which are required for normal activity of the virus. Thus, the peptides of the invention may also be utilized as components in assays for the identification of compounds that interfere with such protein-protein interactions and may, therefore, act as antiviral agents. These assays are discussed, below, in Section 5.5.1.

[0156] As demonstrated in the Example presented below in Section 6, the antiviral activity of the peptides of the invention may show a pronounced type and subtype specificity, i.e., specific peptides may be effective in inhibiting the activity of only specific viruses. This feature of the invention presents many advantages. One such advantage, for example, lies in the field of diagnostics, wherein one can use the antiviral specificity of the peptide of the invention to ascertain the identity of a viral isolate. With respect to HIV, one may easily determine whether a viral isolate consists of an HIV-1 or HIV-2 strain. For example, uninfected CD-4$^+$ cells may be co-infected with an isolate which has been identified as containing HIV the DP178 (SEQ ID:1) peptide, after which the retroviral activity of cell supernatants may be assayed, using, for example, the techniques described above in Section 5.2. Those isolates whose retroviral activity is completely or nearly completely inhibited contain HIV-1. Those isolates whose viral activity is unchanged or only reduced by a small amount, may be considered to not contain HIV-1. Such an isolate may then be treated with one or more of the other DP178 peptides of the invention, and subsequently be tested for its viral activity in order to determine the identify of the viral isolate. The DP107 and DP178 analogs of the invention may also be utilized in a diagnostic capacity specific to the type and subtype of virus or organism in which the specific peptide sequence is found. A diagnostic procedure as described, above, for DP178, may be used in conjunction with the DP107/DP178 analog of interest.

5.5.1. SCREENING ASSAYS

[0157] As demonstrated in the Example presented in Section 8, below, DP107 and DP178 portions of the TM protein gp41 form non-covalent protein-protein interactions. As is also demonstrated, the maintenance of such interactions is necessary for normal viral infectivity. Thus, compounds which bind DP107, bind DP178, and/or act to disrupt,normal DP107/DP178 protein-protein interactions may act as antifusogenic, antiviral or cellular modulatory agents. Described below are assays for the identification of such compounds. Note that, while, for ease and clarity of discussion, DP107 and DP178 peptides will be used as components of the assays described, but it is to be understood that any of the DP-107 analog or DP178 analog peptides described, above, in Sections 5.1 through 5.3 may also be utilized as part of these screens for compounds.

[0158] Compounds which may be tested for an ability to bind DP107, DP178, and/or disrupt DP107/DP178 interactions, and which therefore, potentially represent antifusogenic, antiviral or intracellular modulatory compounds, include, but are not limited to, peptides made of D- and/or L-configuration amino acids (in, for example, the form of random peptide libraries; see Lam, K.S. et al., 1991, Nature 354:82-84), phosphopeptides (in, for example, the form of random or partially degenerate, directed phosphopeptide libraries; see, for example, Songyang, Z. et al., 1993, Cell 72:767-778), antibodies, and small organic or inorganic molecules. Synthetic compounds, natural products, and other sources of potentially effective materials may be screened in a variety of ways, as described in this Section.

[0159] The compounds, antibodies, or other molecules identified may be tested, for example, for an ability to inhibit cell fusion or viral activity, utilizing, for example, assays such as those described, above, in Section 5.5.

[0160] Among the peptides which may be tested are soluble peptides comprising DP107 and/or DP178 domains, and peptides comprising DP107 and/or DP178 domains having one or more mutations within one or both of the domains, such as the M41-P peptide described, below, in the Example presented in Section 8, which contains a isoleucine to proline mutation within the DP178 sequence.

[0161] In one embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP107 peptide for a time sufficient to allow binding of the compound to the DP107 peptide;
(b) removing non-bound compounds; and
(c) determining the presence of the compound bound to the DP107 peptide, thereby identifying an agent to be tested for antiviral ability.

[0162] In a second embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP178 peptide for a time sufficient to allow binding of the compound to the DP178 peptide;
(b) removing non-bound compounds; and
(c) determining the presence of the compound bound to the DP178 peptide, thereby identifying an agent to be tested

for antiviral ability.

[0163] One method utilizing these types of approaches that may be pursued in the isolation of such DP107-binding or DP178-binding compounds is an assay which would include the attachment of either the DP107 or the DP178 peptide to a solid matrix, such as, for example, agarose or plastic beads, microtiter plate wells, petri dishes, or membranes composed of, for example, nylon or nitrocellulose. In such an assay system, either the DP107 or DP178 protein may be anchored onto a solid surface, and the compound, or test substance, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored component may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying.

[0164] Alternatively, an immobilized antibody, preferably a monoclonal antibody, specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

[0165] In order to conduct the assay, the labeled compound is added to the coated surface containing the anchored DP107 or DP178 peptide. After the reaction is complete, unreacted components are removed (e.g., by washing) under conditions such that any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the compound is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the labeled component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the compound (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody).

[0166] Alternatively, such an assay can be conducted in a liquid phase, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for DP107 or DP178, whichever is appropriate for the given assay, or ab antibody specific for the compound, i.e., the test substance, in order to anchor any complexes formed in solution, and a labeled antibody specific for the other member of the complex to detect anchored complexes.

[0167] By utilizing procedures such as this, large numbers of types of molecules may be simultaneously screened for DP107 or DP178-binding capability, and thus potential antiviral activity.

[0168] Further, compounds may be screened for an ability to inhibit the formation of or, alternatively, disrupt DP107/DP178 complexes. Such compounds may then be tested for antifusogenic, antiviral or intercellular modulatory capability. For ease of description, DP107 and DP178 will be referred to as "binding partners." Compounds that disrupt such interactions may exhibit antiviral activity. Such compounds may include, but are not limited to molecules such as antibodies, peptides, and the like described above.

[0169] The basic principle of the assay systems used to identify compounds that interfere with the interaction between the DP107 and DP178 peptides involves preparing a reaction mixture containing peptides under conditions and for a time sufficient to allow the two peptides to interact and bind, thus forming a complex. In order to test a compound for disruptive activity, the reaction is conducted in the presence and absence of the test compound, i.e., the test compound may be initially included in the reaction mixture, or added at a time subsequent to the addition of one of the binding partners; controls are incubated without the test compound or with a placebo. The formation of any complexes between the binding partners is then detected. The formation of a complex in the control reaction, but not in the reaction mixture containing the test compound indicates that the compound interferes with the interaction of the DP107 and DP178 peptides.

[0170] The assay for compounds that interfere with the interaction of the binding partners can be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring one of the binding partners onto a solid phase and detecting complexes anchored on the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the binding partners, e.g., by competition, can be identified by conducting the reaction in the presence of the test substance; i.e., by adding the test substance to the reaction mixture prior to or simultaneously with the binding partners. On the other hand, test compounds that disrupt preformed complexes, e.g. compounds with higher binding constants that displace one of the binding partners from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are described briefly below.

[0171] In a heterogeneous assay system, one binding partner, e.g., either the DP107 or DP178 peptide, is anchored onto a solid surface, and its binding partner, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored species may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying. Alternatively, an immobilized antibody specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

[0172] In order to conduct the assay, the binding partner of the immobilized species is added to the coated surface with or without the test compound. After the reaction is complete, unreacted components are removed (e.g., by washing)

and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the binding partner was pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the binding partner is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the binding partner (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which inhibit complex formation or which disrupt preformed complexes can be detected.

[0173] Alternatively, the reaction can be conducted in a liquid phase in the presence or absence of the test compound, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for one binding partner to anchor any complexes formed in solution, and a labeled antibody specific for the other binding partner to detect anchored complexes. Again, depending upon the order of addition of reactants to the liquid phase, test compounds which inhibit complex or which disrupt preformed complexes can be identified.

[0174] In an alternate embodiment of the invention, a homogeneous assay can be used. In this approach, a preformed complex of the DP107 and DP178 peptides is prepared in which one of the binding partners is labeled, but the signal generated by the label is quenched due to complex formation (see, e.g., U.S. Patent No. 4,109,496 by Rubenstein which utilizes this approach for immunoassays). The addition of a test substance that competes with and displaces one of the binding partners from the preformed complex will result in the generation of a signal above background. In this way, test substances which disrupt DP-107/DP-178 protein-protein interaction can be identified.

[0175] In an alternative screening assay, test compounds may be assayed for the their ability to disrupt a DP178/DP107 interaction, as measured immunometrically using an antibody specifically reactive to a DP107/DP178 complex (i.e., an antibody that recognizes neither DP107 nor DP178 individually). Such an assay acts as a competition assay, and is based on techniques well known to those of skill in the art.

[0176] The above competition assay may be described, by way of example, and not by way of limitation, by using the DP178 and M41Δ178 peptides and by assaying test compounds for the disruption of the complexes formed by these two peptides by immunometrically visualizing DP178/M41Δ178 complexes via the human recombinant Fab, Fab-d, as described, below, in the Example presented in Section 8. M41Δ178 is a maltose binding fusion protein containing a gp41 region having its DP178 domain deleted, and is described, below, in the Example presented in Section 8.

[0177] Utilizing such an assay, M41Δ178 may be immobilized onto solid supports such as microtiter wells. A series of dilutions of a test compound may then be added to each M41Δ178-containing well in the presence of a constant concentration of DP-178 peptide. After incubation, at, for example, room temperature for one hour, unbound DP-178 and test compound are removed from the wells and wells are then incubated with the DP178/M41Δ178-specific Fab-d antibody. After incubation and washing, unbound Fab-d is removed from the plates and bound Fab-d is quantitated. A no-inhibitor control should also be conducted. Test compounds showing an ability to disrupt DP178/M41Δ178 complex formation are identified by their concentration-dependent decrease in the level of Fab-d binding.

[0178] A variation of such an assay may be utilized to perform a rapid, high-throughput binding assay which is capable of directly measuring DP178 binding to M41Δ178 for the determination of binding constants of the ligand of inhibitory constants for competitors of DP178 binding.

[0179] Such an assay takes advantage of accepted radioligand and receptor binding principles. (See, for example, Yamamura, H.I. et al., 1985, "Neurotransmitter Receptor Binding", 2nd ed., Raven Press, NY.) As above, M41Δ178 is immobilized onto a solid support such as a microtiter well. DP178 binding to M41Δ178 is then quantitated by measuring the fraction of DP178 that is bound as ^{125}I-DP178 and calculating the total amount bound using a value for specific activity (dpm/μg peptide) determined for each labeled DP178 preparation. Specific binding to M41Δ178 is defined as the difference of the binding of the labeled DP178 preparation in the microtiter wells (totals) and the binding in identical wells containing, in addition, excess unlabeled DP178 (nonspecifics).

5.5 PHARMACEUTICAL FORMULATIONS, DOSAGES AND MODES OF ADMINISTRATION

[0180] The peptides of the invention may be administered using techniques well known to those in the art. Preferably, agents are formulated and administered systemically. Techniques for formulation and administration may be found in "Remington's Pharmaceutical Sciences", 18th ed., 1990, Mack Publishing Co., Easton, PA. Suitable routes may include oral, rectal, transmucosal, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as, intrathecal, direct intraventricular, intravenous, intraperitoneal, intranasal, or intraocular injections, just to name a few. For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks' solution, Ringer's solution, or physiological saline buffer. For such transmucosal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art.

[0181] In instances wherein intracellular administration of the peptides of the invention or other inhibitory agents is preferred, techniques well known to those of ordinary skill in the art may be utilized. For example, such agents may be

encapsulated into liposomes, then administered as described above. Liposomes are spherical lipid bilayers with aqueous interiors. All molecules present in an aqueous solution at the time of liposome formation are incorporated into the aqueous interior. The liposomal contents are both protected from the external microenvironment and, because liposomes fuse with cell membranes, are effectively delivered into the cell cytoplasm. Additionally, due to their hydrophobicity, when small molecules are to be administered, direct intracellular administration may be achieved.

[0182] Nucleotide sequences encoding the peptides of the invention which are to be intracellularly administered may be expressed in cells of interest, using techniques well known to those of skill in the art. For example, expression vectors derived from viruses such as retroviruses, vaccinia viruses, adeno-associated viruses, herpes viruses, or bovine papilloma viruses, may be used for delivery and expression of such nucleotide sequences into the targeted cell population. Methods for the construction of such vectors and expression constructs are well known. See, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Press, Cold Spring Harbor NY, and Ausubel et al., 1989, Current Protocols in Molecular Biology, Greene Publishing Associates and Wiley Interscience, NY.

[0183] With respect to HIV, peptides of the invention, particularly DP107 and DP178, may be used as' therapeutics in the treatment of AIDS. In addition, the peptides may be used as prophylactic measures in previously uninfected individuals after acute exposure to an HIV virus. Examples of such prophylactic use of the peptides may include, but are not limited to, prevention of virus transmission from mother to infant and other settings where the likelihood of HIV transmission exists, such as, for example, accidents in health care settings wherein workers are exposed to HIV-containing blood products. The successful use of such treatments do not rely upon the generation of a host immune response directed against such peptides.

[0184] Effective dosages of the peptides of the invention to be administered may be determined through procedures well known to those in the art which address such parameters as biological half-life, bioavailability, and toxicity. Given the data presented below in Section 6, DP178, for example, may prove efficacious in vivo at doses required to achieve circulating levels of about 1 to about 10 ng per ml of peptide.

[0185] A therapeutically effective dose refers to that amount of the compound sufficient to result in amelioration of symptoms or a prolongation of survival in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the LD_{50} (the dose lethal to 50% of the population) and the ED50 (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio LD_{50}/ED_{50}. Compounds which exhibit large therapeutic indices are preferred. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED50 with little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For any compound used in the method of the invention, the therapeutically effective dose can be estimated initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range that includes the IC_{50} (e.g., the concentration of the test compound which achieves a half-maximal inhibition of the fusogenic event, such as a half-maximal inhibition of viral infection relative to the amount of the event in the absence of the test compound) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels in plasma may be measured, for example, by high performance liquid chromatography (HPLC).

[0186] The peptides of the invention may, further, serve the role of a prophylactic vaccine, wherein the host raises antibodies against the peptides of the invention, which then serve to neutralize HIV viruses by, for example, inhibiting further HIV infection.

[0187] Administration of the peptides of the invention as a prophylactic vaccine, therefore, would comprise administering to a host a concentration of peptides effective in raising an immune response which is sufficient to neutralize HIV, by, for example, inhibiting HIV ability to infect cells. The exact concentration will depend upon the specific peptide to be administered, but may be determined by using standard techniques for assaying the development of an immune response which are well known to those of ordinary skill in the art. The peptides to be used as vaccines are usually administered intramuscularly.

[0188] The peptides may be formulated with a suitable adjuvant in order to enhance the immunological response. Such adjuvants may include, but are not limited to mineral gels such as aluminum hydroxide; surface active substances such as lysolecithin, pluronic polyols, polyanions; other peptides; oil emulsions; and potentially useful human adjuvants such as BCG and Corynebacterium parvum. Many methods may be used to introduce the vaccine formulations described here. These methods include but are not limited to oral, intradermal, intramuscular, intraperitoneal, intravenous, subcutaneous, and intranasal routes.

[0189] Alternatively, an effective concentration of polyclonal or monoclonal antibodies raised against the peptides of the invention may be administered to a host so that no uninfected cells become infected by HIV. The exact concentration of such antibodies will vary according to each specific antibody preparation, but may be determined using standard techniques well known to those of ordinary skill in the art. Administration of the antibodies may be accomplished using a variety of techniques, including, but not limited to those described in this section.

[0190] For all such treatments described above, the exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. (See e.g. Fingl et al., 1975, in "The Pharmacological Basis of Therapeutics", Ch. 1 p1).

[0191] It should be noted that the attending physician would know how to and when to terminate, interrupt, or adjust administration due to toxicity, or to organ dysfunctions. Conversely, the attending physician would also know to adjust treatment to higher levels if the clinical response were not adequate (precluding toxicity). The magnitude of an administrated dose in the management of the oncogenic disorder of interest will vary with the severity of the condition to be treated and the route of administration. The dose and perhaps dose frequency, will also vary according to the age, body weight, and response of the individual patient. A program comparable to that discussed above may be used in veterinary medicine.

[0192] Use of pharmaceutically acceptable carriers to formulate the compounds herein disclosed for the practice of the invention into dosages suitable for systemic administration is within the scope of the invention. With proper choice of carrier and suitable manufacturing practice, the compositions of the present invention, in particular, those formulated as solutions, may be administered parenterally, such as by intravenous injection. The compounds can be formulated readily using pharmaceutically acceptable carriers well known in the art into dosages suitable for oral administration. Such carriers enable the compounds of the invention to be formulated as tablets, pills, capsules, liquids, gels, syrups, slurries, suspensions and the like, for oral ingestion by a patient to be treated.

[0193] Pharmaceutical compositions suitable for use in the present invention include compositions wherein the active ingredients are contained in an effective amount to achieve its intended purpose. Determination of the effective amounts is well within the capability of those skilled in the art, especially in light of the detailed disclosure provided herein.

[0194] In addition to the active ingredients, these pharmaceutical compositions may contain suitable pharmaceutically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. The preparations formulated for oral administration may be in the form of tablets, dragees, capsules, or solutions.

[0195] The pharmaceutical compositions of the present invention may be manufactured in a manner that is itself known, e.g., by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes.

[0196] Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. optionally, the suspension may also contain suitable stabilizers or agents which increase the solubility of the compounds to allow for the preparation of highly concentrated solutions.

[0197] Pharmaceutical preparations for oral use can be obtained by combining the active compounds with solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients are, in particular, fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth, methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate.

[0198] Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or dragee coatings for identification or to characterize different combinations of active compound doses.

[0199] Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added.

6. EXAMPLE: DP178 (SEQ ID:1) IS A POTENT INHIBITOR OF HIV-1 INFECTION

[0200] In this example, DP178 (SEQ ID:1) is shown to be a potent inhibitor of HIV-1 mediated CD-4$^+$ cell-cell fusion and infection by cell free virus. In the fusion assay, this peptide completely blocks virus induced syncytia formation at concentrations of from 1-10 ng/ml. In the infectivity assay the inhibitory concentration is somewhat higher, blocking infection at 90ng/ml. It is further shown that DP178 (SEQ ID:1) shows that the antiviral activity of DP178 (SEQ ID:1) is highly specific for HIV-1. Additionally, a synthetic peptide, DP-185 (SEQ ID:3), representing a HIV-1-derived DP178

homolog is also found to block HIV-1-mediated syncytia formation.

6.1. MATERIALS AND METHODS

6.1.1. PEPTIDE SYNTHESIS

[0201] Peptides were synthesized using Fast Moc chemistry on an Applied Biosystems Model 431A peptide synthesizer. Generally, unless otherwise noted, the peptides contained amidated carboxy termini and acetylated amino termini. Amidated peptides were prepared using Rink resin (Advanced Chemtech) while peptides containing free carboxy termini were synthesized on Wang (p-alkoxy-benzyl-alcohol) resin (Bachem). First residues were double coupled to the appropriate resin and subsequent residues were single coupled. Each coupling step was followed by acetic anhydride capping. Peptides were cleaved from the resin by treatment with trifluoracetic acid (TFA) (10ml), H_2O (0.5ml), thioanisole (0.5ml), ethanedithiol (0.25ml), and crystalline phenol (0.75g). Purification was carried out by reverse phase HPLC. Approximately 50mg samples of crude peptide were chromatographed on a Waters Delta Pak C18 column (19mm x 30cm, 15μ spherical) with a linear gradient; H_2O/acetonitrile 0.1% TFA. Lyophilized peptides were stored desiccated and peptide solutions were made in water at about 1mg/ml. Electrospray mass spectrometry yielded the following results: DP178 (SEQ ID:1): 4491.87 (calculated 4491.94); DP-180 (SEQ ID:2):4491.45 (calculated 4491.94); DP-185 (SEQ ID:3):not done (calculated 4546.97).

6.1.2. VIRUS

[0202] The HIV-I_{LAI} virus was obtained from R. Gallo (Popovic, M. et al., 1984, Science 224:497-508) and propagated in CEM cells cultured in RPMI 1640 containing 10% fetal calf serum. Supernatant from the infected CEM cells was passed through a 0.2μm filter and the infectious titer estimated in a microinfectivity assay using the AA5 cell line to support virus replication. For this purpose, 25μl of serial diluted virus was added to 75μl AA5 cells at a concentration of 2 x 10^5/ml in a 96-well microtitre plate. Each virus dilution was tested in triplicate. Cells were cultured for eight days by addition of fresh medium every other day. On day 8 post infection, supernatant samples were tested for virus replication as evidenced by reverse transcriptase activity released to the supernatant. The $TCID_{50}$ was calculated according to the Reed and Muench formula (Reed, L.J. et al., 1938, Am. J. Hyg. 27:493-497). The titer of the HIV-1_{LAI} and HIV-1_{MN} stocks used for these studies, as measured on the AA5 cell line, was approximately 1.4 x 10^6 and 3.8 x 10^4 $TCID_{50}$/ml, respectively.

6.1.3. CELL FUSION ASSAY

[0203] Approximately 7 x 10^4 Molt cells were incubated with 1 x 10^4 CEM cells chronically infected with the HIV-1_{LAI} virus in 96-well plates (one-half area cluster plates; Costar, Cambridge, MA) in a final volume of 100μl culture medium as previously described (Matthews, T.J. et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5428). Peptide inhibitors were added in a volume of 10μl and the cell mixtures were incubated for 24 hr. at 37°C. At that time, multinucleated giant cells were estimated by microscopic examination at a 40x magnification which allowed visualization of the entire well in a single field.

6.1.4. CELL FREE VIRUS INFECTION ASSAY

[0204] Synthetic peptides were incubated at 37°C with either 247 $TCID_{50}$ (for experiment depicted in FIG. 2), or 62 $TCID_{50}$ (for experiment depicted in FIG.3) units of HIV-1_{LAI} virus or 25 $TCID_{50}$ units of HIV-2_{NIHZ} and CEM $CD4^+$ cells at peptide concentrations of 0, 0.04, 0.4, 4.0, and 40μg/ml for 7 days. The resulting reverse transcriptase (RT) activity in counts per minute was determined using the assay described, below, in Section 6.1.5. See, Reed, L.J. et al., 1938, Am. J. Hyg. 27: 493-497 for an explanation of $TCID_{50}$ calculations.

6.1.5. REVERSE TRANSCRIPTASE ASSAY

[0205] The micro-reverse transcriptase (RT) assay was adapted from Goff et al. (Goff, S. et al., 1981, J. Virol. 38: 239-248) and Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). Supernatants from virus/cell cultures are adjusted to 1% Triton-X100. A 10μl sample of supernatant was added to 50μl of RT cocktail in a 96-well U-bottom microtitre plate and the samples incubated at 37°C for 90 min. The RT cocktail contained 75mM KCl, 2mM dithiothreitol, 5mM $MgCl_2$, 5μg/ml poly A (Pharmacia, cat. No. 27-4110-01), 0.25 units/ml oligo dT (Pharmacia, cat. No. 27-7858-01), 0.05% NP40, 50mM Tris-HCl, pH 7.8, 0.5μM nonradioactive dTTP, and 10μCi/ml ^{32}P-dTTP (Amersham, cat. No. PB.10167).

[0206] After the incubation period, 40μl of reaction mixture was applied to a Schleicher and Schuell (S+S) NA45

membrane (or DE81 paper) saturated in 2 x SSC buffer (0.3M NaCl and 0.003M sodium citrate) held in a S+S Minifold over one sheet of GB003 (S+S) filter paper, with partial vacuum applied. Each well of the minifold was washed four times with 200μl 2xSSC, under full vacuum. The membrane was removed from the minifold and washed 2 more times in a pyrex dish with an excess of 2xSSC. Finally, the membrane was drained on absorbent paper, placed on Whatman #3 paper, covered with Saran wrap, and exposed to film overnight at -70°C.

6.2. RESULTS

6.2.1. PEPTIDE INHIBITION OF INFECTED CELL-INDUCED SYNCYTIA FORMATION

[0207] The initial screen for antiviral activity assayed peptides' ability to block syncytium formation induced by overnight co-cultivation of uninfected Molt4 cells with chronically HIV-1 infected CEM cells. The results of several such experiments are presented herein. In the first of these experiments, serial DP178 (SEQ ID:1) peptide concentrations between 10μg/ml and 12.5ng/ml were tested for blockade of the cell fusion process. For these experiments, CEM cells chronically infected with either HIV-1_{LAI}, HIV-1_{MN}, HIV-1_{RF}, or HIV-1_{SF2} virus were cocultivated overnight with uninfected Molt 4 cells. The results (FIG. 4) show that DP178 (SEQ ID:1) afforded complete protection against each of the HIV-1 isolates down to the lowest concentration of DP178 (SEQ ID:1) used. For HIV_{LAI} inhibition, the lowest concentration tested was 12.5ng/ml; for all other HIV-1 viruses, the lowest concentration of DP178 (SEQ ID:1) used in this study was 100ng/ml. A second peptide, DP-180 (SEQ ID:2), containing the same amino acid residues as DP178 (SEQ ID:1) but arranged in a random order exhibited no evidence of anti-fusogenic activity even at the high concentration of 40μg/ml (FIG. 4). These observations indicate that the inhibitory effect of DP178 (SEQ ID:1) is primary sequence-specific and not related to non-specific peptide/protein interactions. The actual endpoint (i.e., the lowest effective inhibitory concentration) of DP178 inhibitory action is within the range of 1-10 ng/ml.

[0208] The next series of experiments involved the preparation and testing of a DP178 (SEQ ID:1) homolog for its ability to inhibit HIV-1-induced syncytia formation. As shown in FIG. 1, the sequence of DP-185 (SEQ ID:3) is slightly different from DP178 (SEQ ID:1) in that its primary sequence is taken from the HIV-1_{SF2} isolate and contains several amino acid differences relative to DP178 (SEQ ID:1) near the N terminus. As shown in FIG. 4, DP-185 (SEQ ID:3), exhibits inhibitory activity even at 312.5ng/ml, the lowest concentration tested.

[0209] The next series of experiments involved a comparison of DP178 (SEQ ID:1) HIV-1 and HIV-2 inhibitory activity. As shown in FIG. 5, DP178 (SEQ ID:1) blocked HIV-1-mediated syncytia formation at peptide concentrations below 1ng/ml. DP178 (SEQ ID:1) failed, however, to block HIV-2 mediated syncytia formation at concentrations as high as 10μg/ml. This striking 4 log selectivity of DP178 (SEQ ID:1) as an inhibitor of HIV-1-mediated cell fusion demonstrates an unexpected HIV-1 specificity in the action of DP178 (SEQ ID:1). DP178 (SEQ ID:1) inhibition of HIV-1-mediated cell fusion, but the peptide's inability to inhibit HIV-2 medicated cell fusion in the same cell type at the concentrations tested provides further evidence for the high degree of selectivity associated with the antiviral action of DP178 (SEQ ID:1).

6.2.2. PEPTIDE INHIBITION OF INFECTION BY CELL-FREE VIRUS

[0210] DP178 (SEQ ID:1) was next tested for its ability to block CD-4^+ CEM cell infection by cell free HIV-1 virus. The results, shown in FIG. 2, are from an experiment in which DP178 (SEQ ID:1) was assayed for its ability to block infection of CEM cells by an HIV-1_{LAI} isolate. Included in the experiment were three control peptides, DP-116 (SEQ ID:9), DP-125 (SEQ ID:8), and DP-118 (SEQ ID:10). DP-116 (SEQ ID:9) represents a peptide previously shown to be inactive using this assay, and DP-125 (SEQ ID:8; Wild, C. et al., 1992, Proc. Natl. Acad, Sci. USA 89:10,537) and DP-118 (SEQ ID:10) are peptides which have previously been shown to be active in this assay. Each concentration (0, 0.04, 0.4, 4, and 40μg/ml) of peptide was incubated with 247 $TCID_{50}$ units of HIV-1_{LAI} virus and CEM cells. After 7 days of culture, cell-free supernatant was tested for the presence of RT activity as a measure of successful infection. The results, shown in FIG. 2, demonstrate that DP178 (SEQ ID:1) inhibited the de novo infection process mediated by the HIV-1 viral isolate at concentrations as low as 90ng/ml (IC50=90ng/ml). In contrast, the two positive control peptides, DP-125 (SEQ: ID: 8) and DP-118 (SEQ ID:10), had over 60-fold higher IC50 concentrations of approximately 5μg/ml.

[0211] In a separate experiment, the HIV-1 and HIV-2 inhibitory action of DP178 (SEQ ID:1) was tested with CEM cells and either HIV-1_{LAI} or HIV-2_{NIHZ}. 62 $TCID_{50}$ HIV-1_{LAI} or 25 $GCID_{50}$ HIV-2_{NIHZ} were used in these experiments, and were incubated for 7 days. As may be seen in FIG. 3, DP178 (SEQ ID:1) inhibited HIV-1 infection with an IC50 of about 31ng/ml. In contrast, DP178 (SEQ ID:1) exhibited a much higher IC50 for HIV-2_{NIHZ}, thus making DP178 (SEQ ID:1) two logs more potent as a HIV-1 inhibitor than a HIV-2 inhibitor. This finding is consistent with the results of the fusion inhibition assays described, above, in Section 6.2.1, and further supports a significant level of selectivity (i.e., for HIV-1 over HIV-2).

7. EXAMPLE: THE HIV-1 INHIBITOR, DP178 (SEQ ID:1) IS NON-CYTOTOXIC

[0212] In this Example, the 36 amino acid synthetic peptide inhibitor DP178 (SEQ ID:1) is shown to be non-cytotoxic to cells in culture, even at the highest peptide concentrations (40μg/ml) tested.

7.1. MATERIALS AND METHODS

[0213] Cell proliferation and toxicity assay: Approximately $3.8x10^5$ CEM cells for each peptide concentration were incubated for 3 days at 37°C in T25 flasks. Peptides tested were DP178 (SEQ ID:1) and DP-116 (SEQ ID:9), as described in FIG. 1. Peptides were synthesized as described, above, in Section 6.1. The concentrations of each peptide used were 0, 2.5, 10, and 40μg/ml. Cell counts were taken at incubation times of 0, 24, 48, and 72 hours.

7.2. RESULTS

[0214] Whether the potent HIV-1 inhibitor DP178 (SEQ ID:1) exhibited any cytotoxic effects was assessed by assaying the peptide's effects on the proliferation and viability of cells in culture. CEM cells were incubated in the presence of varying concentrations of DP178 (SEQ ID:1), and DP-116 (SEQ ID:9), a peptide previously shown to be ineffective as a HIV inhibitor (Wild, C. et al., 1992, Proc. Natl. Acad. Sci. USA 89:10,537-10,541). Additionally, cells were incubated in the absence of either peptide.

[0215] The results of the cytotoxicity study demonstrate that DP178 (SEQ ID:1) exhibits no cytotoxic effects on cells in culture. As can be seen, below, in Table XXIV, even the proliferation and viability characteristics of cells cultured for 3 days in the presence of the highest concentration of DP178 (SEQ ID:1) tested (40μg/ml) do not significantly differ from the DP-116 (SEQ ID:9) or the no-peptide controls. The cell proliferation data is also represented in graphic form in FIG. 6. As was demonstrated in the Working Example presented above in Section 6, DP178 (SEQ ID:1) completely inhibits HIV-1 mediated syncytia formation at peptide concentrations between 1 and 10ng/ml, and completely inhibits cell-free viral infection at concentrations of at least 90ng/ml. Thus, this study demonstrates that even at peptide concentrations greater than 3 log higher than the HIV inhibitory dose, DP178 (SEQ ID:1) exhibits no cytotoxic effects.

TABLE XXIV

		% Viability at time (hours)			
Peptide	Peptide Concentration μg/ml	0	24	48	72
DP178 (SEQ ID:1)	40	98	97	95	97
	10	98	97	98	98
	2.5	98	93	96	96
DP116 (SEQ ID:9)	40	98	95	98	97
	10	98	95	93	98
	2.5	98	96	98	99
No Peptide	0	98	97	99	98

8. EXAMPLE: THE INTERACTION OF DP178 AND DP107

[0216] Soluble recombinant forms of gp41 used in the example described below provide evidence that the DP178 peptide associates with a distal site on gp41 whose interactive structure is influenced by the DP107 leucine zipper motif. A single mutation disrupting the coiled-coil structure of the leucine zipper domain transformed the soluble recombinant gp41 protein from an inactive to an active inhibitor of HIV-1 fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107, determinant. The results also indicate that the anti-HIV activity of various gp41 derivatives (peptides and recombinant proteins) may be due to their ability to form complexes with viral gp41 and interfere with its fusogenic process.

8.1. MATERIALS AND METHODS

8.1.1. CONSTRUCTION OF FUSION PROTEINS AND GP41 MUTANTS

[0217] Construction of fusion proteins and mutants shown in FIG. 7 was accomplished as follows: the DNA sequence corresponding to the extracellular domain of gp41 (540-686) was cloned into the Xmn I site of the expression vector

pMal-p2 (New England Biolab) to give M41. The gp41 sequence was amplified from pgtat (Malim et al., 1988, Nature 355: 181-183) by using polymerase chain reaction (PCR) with upstream primer 5'-ATGACGCTGACGGTACAGGCC-3' (primer A) and downstream primer 5'-TGACTAAGCTTAATACCACAGCCAATTTGTTAT-3' (primer B). M41-P was constructed by using the T7-Gen in vitro mutagenesis kit from United States Biochemicals (USB) following the supplier's instructions. The mutagenic primer (5'-GGAGCTGCTTGGGGCCCCAGAC-3') introduces an Ile to Pro mutation in M41 at position 578. M41Δ107, from which the DP-107 region has been deleted, was made using a deletion mutagenic primer 5'-CCAAATCCCCAGGAGCTGCTCGAGCTGCACTATACCAGAC-3' (primer C) following the USB T7-Gen mutagenesis protocol. M41Δ178, from which the DP-178 region has been deleted, was made by cloning the DNA fragment corresponding to gp41 amino acids 540-642 into the Xmn I site of pMal-p2. Primer A and 5'-ATAGCTTCTAGATTAATTGTTAATTTCTCTGTCCC-3' (primer D) were used in the PCR with the template pgtat to generate the inserted DNA fragments. M41-P was used as the template with primer A and D in PCR to generate M41-PΔ178. All inserted sequences and mutated residues were checked by restriction enzyme analysis and confirmed by DNA sequencing.

8.1.2. PURIFICATION AND CHARACTERIZATION OF FUSION PROTEINS

[0218] The fusion proteins were purified according to the protocol described in the manufacturer's brochure of protein fusion and purification systems from New England Biolabs (NEB). Fusion proteins (10 ng) were analyzed by electrophoresis on 8% SDS polyacrylamide gels. Western blotting analysis was performed as described by Sambrook et al., 1989, Molecular Cloning: A Laboratory Manual, 2d Ed, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, Ch. 18, pp. 64-75. An HIV-1 positive serum diluted 1000-fold, or a human Fab derived from repertoire cloning was used to react with the fusion proteins. The second antibody was HRP-conjugated goat antihuman Fab. An ECL Western blotting detection system (Amersham) was used to detect the bound antibody. A detailed protocol for this detection system was provided by the manufacturer. Rainbow molecular weight markers (Amersham) were used to estimate the size of fusion proteins.

8.1.3. CELL FUSION ASSAYS FOR ANTI-HIV ACTIVITY

[0219] Cell fusion assays were performed as previously described (Matthews et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5481). CEM cells (7 X 10^4) were incubated with HIV-1_{IIIB} chronically infected CEM cells (10^4) in 96-well flat-bottomed half-area plates (Costar) in 100 μl culture medium. Peptide and fusion proteins at various concentrations in 10 μl culture medium were incubated with the cell mixtures at 37°C for 24 hours. Multinucleated syncytia were estimated with microscopic examination. Both M41 and M41-P did not show cytotoxicity at the concentrations tested and shown in FIG. 8.

[0220] Inhibition of HIV-1 induced cell-cell fusion activity was carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41-PΔ178 as indicated in FIG. 9. There was no observable syncytia in the presence of 10 nM DP178. No peptide or fusion protein was added in the control samples.

8.1.4. ELISA ANALYSIS OF DP178 BINDING TO THE LEUCINE ZIPPER MOTIF OF GP41

[0221] The amino acid sequence of DP178 used is: YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF. For enzyme linked immunoassay (ELISA), M41Δ178 or M41-PΔ178 (5 μg/ml) in 0.1M $NaHCO_3$, pH 8.6, were coated on 96 wells Linbro ELISA plates (Flow Lab, Inc.) overnight. Each well was washed three times with distilled water then blocked with 3% bovine serum albumin (BSA) for 2 hours. After blocking, peptides with 0.5% BSA in TBST (40 mM Tris-HCl pH7.5, 150 mM NaCl, 0.05% Tween 20) were added to the ELISA plates and incubated at room temperature for 1 hour. After washing three times with TBST, Fab-d was added at a concentration of 10 ng/ml with 0.5% BSA in TBST. The plates were washed three times with TBST after incubation at room temperature for 1 hour. Horse radish peroxidase (HRP) conjugated goat antihuman Fab antiserum at a 2000 fold dilution in TBST with 0.5% BSA was added to each well and incubated at room temperature for 45 minutes. The plates were then washed four times with TBST. The peroxidase substrate o-phenylene diamine (2.5 mg/ml) and 0.15% H_2O_2 were added to develop the color. The reaction was stopped with an equal volume of 4.5 N H_2SO_4 after incubation at room temperature for 10 minutes. The optical density of the stopped reaction mixture was measured with a micro plate reader (Molecular Design) at 490 nm. Results are shown in FIG. 10.

8.2. RESULTS

8.2.1. THE EXPRESSION AND CHARACTERIZATION OF THE ECTODOMAIN OF gp41

[0222] As a step toward understanding the roles of the two helical regions in gp41 structure and function, the ectodomain

of gp41 was expressed as a maltose binding fusion protein (M41) (FIG. 7). The fusogenic peptide sequence at the N-terminal of gp41 was omitted from this recombinant protein and its derivatives to improve solubility. The maltose binding protein facilitated purification of the fusion proteins under relatively mild, non-denaturing conditions. Because the M41 soluble recombinant gp41 was not glycosylated, lacked several regions of the transmembrane protein (i.e., the fusion peptide, the membrane spanning, and the cytoplasmic domains), and was expressed in the absence of gp120, it was not expected to precisely reflect the structure of native gp41 on HIV-1 virions. Nevertheless, purified M41 folded in a manner that preserved certain discontinuous epitopes as evidenced by reactivity with human monoclonal antibodies, 98-6, 126-6, and 50-69, previously shown to bind conformational epitopes on native gp41 expressed in eukaryotic cells (Xu et al., 1991, J. Virol. 65: 4832-4838; Chen, 1994, J. Virol. 68:2002-2010). Thus, at least certain regions of native gp41 defined by these antibodies appear to be reproduced in the recombinant fusion protein M41. Furthermore, M41 reacted with a human recombinant Fab (Fab-d) that recognizes a conformational epitope on gp41 and binds HIV-1 virions as well as HIV-1 infected cells but not uninfected cells as analyzed by FACS. Deletion of either helix motif, i.e., DP107 or DP178, of the M41 fusion protein eliminated reactivity with Fab-d. These results indicate that both helical regions, separated by 60 amino acids in the primary sequence, are required to maintain the Fab-d epitope.

8.2.2. ANTI-HIV ACTIVITY OF THE RECOMBINANT ECTODOMAIN OF GP41

[0223] The wild type M41 fusion protein was tested for anti-HIV-1 activity. As explained, supra, synthetic peptides corresponding to the leucine zipper (DP107) and the C-terminal putative helix (DP178) show potent anti-HIV activity. Despite inclusion of both these regions, the recombinant M41 protein did not affect HIV-1 induced membrane fusion at concentrations as high as 50 μM (Table XXV, below).

TABLE XXV

DISRUPTION OF THE LEUCINE ZIPPER OF GP41 FREES THE ANTI-HIV MOTIF

	DP107	DP178	M41	M41-P	M41-PΔ178
Cell fusion (IC_{90})	1 μM	1 nM	>50 μM	83 nM	> 50 μM
Fab-D binding (k_D)	-	-	$3.5x10^{-9}$	$2.5x10^{-8}$	-
HIV infectivity (IC_{90})	1 μM	80 nM	> 16 μM	66 nM	> 8 μM

1 The affinity constants of Fab-d binding to the fusion proteins were determined using a protocol described by B. Friguet et al., 1985, J. Immunol. Method. 77:305-319.

- = No detectable binding of Fab-d to the fusion proteins.

Antiviral Infectivity Assays. 20 μl of serially diluted virus stock was incubated for 60 minutes at ambient temperature with 20 μl of the indicated concentration of purified recombinant fusion protein in RPMI 1640 containing 10% fetal bovine serum and antibiotics in a 96-well microtiter plate. 20 μl of CEM4 cells at 6 x 10^5 cells/ml were added to each well, and cultures were incubated at 37°C in a humidified CO_2 incubator. Cells were cultured for 9 days by the addition of fresh medium every 2 to 3 days. On days 5, 7, and 9 postinfection, supernatant samples were assayed for reverse transcriptase (RT) activity, as described below, to monitor viral replication. The 50% tissue culture infectious dose ($TCID_{50}$) was calculated for each condition according to the formula of Reed & Muench, 1937, Am. J. Hyg. 27:493-497. RT activity was determined by a modification of the published methods of Goff et al., 1981, J. Virol. 38:239-248 and Willey et al., 1988, J. Virol. 62:139-147 as described in Chen et al., 1993, AIDS Res. Human Retroviruses 9:1079-1086.

[0224] Surprisingly, a single amino acid substitution, proline in place of isoleucine in the middle of the leucine zipper motif, yielded a fusion protein (M41-P) which did exhibit antiviral activity (Table XXV and Fig. 8). As seen in Table XXV, M41-P blocked syncytia formation by 90% at approximately 85 nM and neutralized HIV-1_{IIIB} infection by 90% at approximately 70 nM concentrations. The anti-HIV-1 activity of M41-P appeared to be mediated by the C-terminal helical sequence since deletion of that region from M41-P yielded an inactive fusion protein, M41-PΔ178 (Table XXV). This interpretation was reinforced by experiments demonstrating that a truncated fusion protein lacking the DP178 sequence, M41Δ178, abrogated the potent anti-fusion activity of the DP178 peptide in a concentration-dependent manner (FIG. 9). The same truncated fusion protein containing the proline mutation disrupting the leucine zipper, M41-PΔ178, was not active in similar competition experiments (FIG. 9). The results indicate that the DP178 peptide associates with a second site on gp41 whose interactive structure is dependent on a wild type leucine zipper sequence. A similar interaction may occur within the wild type fusion protein, M41, and act to form an intramolecular clasp which sequesters the DP178

region, making it unavailable for anti-viral activity.

[0225] A specific association between these two domains is also indicated by other human monoclonal Fab-d studies. For example, Fab-d failed to bind either the DP178 peptide or the fusion protein M41Δ178, but its epitope was reconstituted by simply mixing these two reagents together (FIG. 10). Again, the proline mutation in the leucine zipper domain of the fusion protein, M41-PΔ178, failed to reconstitute the epitope in similar mixing experiments.

9. EXAMPLE: METHOD FOR,COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES

[0226] A number of known coiled-coil sequences have been well described in the literature and contain heptad repeat positioning for each amino acid. Coiled-coil nomenclature labels each of seven amino acids of a heptad repeat A through G, with amino acids A and D tending to be hydrophobic positions. Amino acids E and G tend to be charged. These four positions (A, D, E, and G) form the amphipathic backbone structure of a monomeric alpha-helix. The backbones of two or more amphipathic helices interact with each other to form di-, tri-, tetrameric, etc., coiled-coil structures. In order to begin to design computer search motifs, a series of well characterized coiled coils were chosen including yeast transcription factor GCN4, Influenza Virus hemagglutinin loop 36, and human proto-oncogenes c-Myc, c-Fos, and c-Jun. For each peptide sequence, a strict homology for the A and D positions, and a list of the amino acids which could be excluded for the B, C, E, F, and G positions (because they are not observed in these positions) was determined. Motifs were tailored to the DP107 and DP178 sequences by deducing the most likely possibilities for heptad positioning of the amino acids of HIV-1 Bru DP-107, which is known to have coiled-coil structure, and HIV-1 Bru DP178, which is still structurally undefined. The analysis of each of the sequences is contained in FIG. 12. For example, the motif for GCN4 was designed as follows:

1. The only amino acids (using standard single letter amino acid codes) found in the A or D positions of GCN4 were [LMNV].
2. All amino acids were found at B, C, E, F, and G positions except {CFGIMPTW}.
3. The PESEARCH motif would, therefore, be written' as follows:

[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)

Translating or reading the motif: "at the first A position either L, M, N, or V must occur; at positions B and C (the next two positions) accept everything except C, F, G, I, M, P, T, or W; at the D position either L, M, N, or V must occur; at positions E, F, and G (the next 3 positions) accept everything except C, F, G, I, M, P, T, or W." This statement is contained four times in a 28-mer motif and five times in a 35-mer motif. The basic motif key then would be: [LMNV]-{CFGIMPTW}. The motif keys for the remaining well described coiled-coil sequences are summarized in FIG. 12.

[0227] The motif design for DP107 and DP178 was slightly different than the 28-mer model sequences described above due to the fact that heptad repeat positions are not defined and the peptides are both longer than 28 residues. FIG. 13 illustrates several possible sequence alignments for both DP107 and DP178 and also includes motif designs based on 28-mer, 35-mer, and full-length peptides. Notice that only slight differences occur in the motifs as the peptides are lengthened. Generally, lengthening the base peptide results in a less stringent motif. This is very useful in broadening the possibilities for identifying DP107-or DP-178-like primary amino acid sequences referred to in this document as "hits".

[0228] In addition to making highly specific motifs for each type peptide sequence to be searched, it is also possible to make "hybrid" motifs. These motifs are made by "crossing" two or more very stringent motifs to make a new search algorithm which will find not only both "parent" motif sequences but also any peptide sequences which have similarities to one, the other, or both "parents". For example, in FIG. 14 the "parent" sequence of GCN4 is crossed with each of the possible "parent" motifs of DP-107. Now the hybrid motif must contain all of the amino acids found in the A and D positions of both parents, and exclude all of the amino acids not found in either parent at the other positions. The resulting hybrid from crossing GCN4 or [LMNV]{CFGIMPTW} and DP107 (28-mer with the first L in the D position) or [ILQT]{CDFIMPST}, is [ILMNQTV]{CFIMPT}. Notice that now only two basic hybrid motifs exist which cover both framing possibilities, as well as all peptide lengths of the parent DP-107 molecule. FIG. 15 represents the "hybridizations" of GCN4 with DP-178. FIG. 16 represents the "hybridizations" of DP107 and DP178. It is important to keep in mind that the represented motifs, both parent and hybrid, are motif keys and not the depiction of the full-length motif needed to actually do the computer search.

[0229] Hybridizations can be performed on any combination of two or more motifs. FIG. 17 summarizes several three-motif hybridizations including GCN4, DP107 (both frames), and DP178 (also both frames). Notice that the resulting

motifs are now becoming much more similar to each other. In fact, the first and third hybrid motifs are actually subsets of the second and fourth hybrid motifs respectively. This means that the first and third hybrid motifs are slightly more stringent than the second and fourth. It should also be noted that with only minor changes in these four motifs, or by hybridizing them, a single motif could be obtained which would find all of the sequences. However, it should be remembered that stringency is also reduced. Finally, the most broad-spectrum and least-stringent hybrid motif is described in FIG. 18 which summarizes the hybridization of GCN4, DP107 (both frames), DP178 (both frames), c-Fos, c-Jun, c-Myc, and Flu loop 36.

[0230] A special set of motifs was designed based on the fact that DP-178 is located only approximately ten amino acids upstream of the transmembrane spanning region of gp41 and just C-terminal to a proline which separates DP107 and DP178. It has been postulated that DP178 may be an amphipathic helix when membrane associated, and that the proline might aid in the initiation of the helix formation. The same arrangement was observed in Respiratory Syncytial Virus; however, the DP178-like region in this virus also had a leucine zipper just C-terminal to the proline. Therefore, N-terminal proline-leucine zipper motifs were designed to analyze whether any other viruses might contain this same pattern. The motifs are summarized in FIG. 19.

[0231] The PC/Gene protein database contains 5879 viral amino acid sequences (library file PVIRUSES; CD-ROM release 11.0). Of these, 1092 are viral enveloped or glycoprotein sequences (library file PVIRUSE1). Tables V through XIV contain lists of protein sequence names and motif hit locations for all the motifs searched.

10. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107 AND DP178-LIKE SEQUENCES IN HUMAN IMMUNODEFICIENCY VIRUS

[0232] FIG. 20 represents search results for HIV-1 BRU isolate gp41 (PC/Gene protein sequence PENV_HV1BR). Notice that the hybrid motif which crosses DP-107 and DP-178 (named 107x178x4; the same motif as found in FIG. 16 found three hits including amino acids 550-599, 636-688, and 796-823. These areas include DP-107 plus eight N-terminal and four C-terminal amino acids; DP178 plus seven N-terminal and ten C-terminal amino acids; and an area inside the transmembrane region (cytoplasmic). FIG. 20 also contains the results obtained from searching with the motif named ALLMOTI5, for which the key is found in FIG. 17 ({CDGHP} {CFP}x5). This motif also found three hits including DP107 (amino acids 510-599), DP178 (615-717), and a cytoplasmic region (772-841). These hits overlap the hits found by the motif 107x178x4 with considerable additional sequences on both the amino and carboxy termini. This is not surprising in that 107x178x4 is a subset of the ALLMOTI5 hybrid motif. Importantly, even though the stringency of ALLMOTI5 is considerably less than 107x178x4, it still selectively identifies the DP107 and DP178 regions of gp41 shown to contain sequences for inhibitory peptides of HIV-1. The results of these two motif searches are summarized in Table V under the PC/Gene protein sequence name PENV HV1BR. The proline-leucine zipper motifs also gave several hits in HIV-1 BRU including 503-525 which is at the very C-terminus of gp120, just upstream of the cleavage site (P7LZIPC and P12LZIPC); and 735-768 in the cytoplasmic domain of gp41 (P23LZIPC). These results are found in Tables VIII, IX, and X under the same sequence name as mentioned above. Notice that the only area of HIV-1 BRU which is predicted by the Lupas algorithm to contain a coiled-coil region, is from amino acids 635-670. This begins eight amino acids N-terminal to the start and ends eight amino acids N-terminal to the end of DP178. DP107, despite the fact that it is a known coiled coil, is not predicted to contain a coiled-coil region using the Lupas method.

11. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN RESPIRATORY SYNCYTIAL VIRUS

[0233] FIG. 21 represents search results for Human Respiratory Syncytial Virus (RSV; Strain A2) fusion glycoprotein F1 (PC/Gene protein sequence name PVGLF_ HRSVA). Motif 107x178x4 finds three hits including amino acids 152-202, 213-243, and 488-515. The arrangement of these hits is similar to what is found in HIV-1 except that the motif finds two regions with similarities to DP-178, one just downstream of what would be called the DP107 region or amino acids 213-243, and one just upstream of the transmembrane region (also similar to DP178) or amino acids 488-515. Motif ALLMOTI5 also finds three areas including amino acids 116-202, 267-302, and 506-549. The proline-leucine zipper motifs also gave several hits including amino acids 205-221 and 265-287 (P1LZIPC 265-280, P12LZIPC), and 484-513 (P7LZIPC and P12LZIPC 484-506, P23LZIPC). Notice that the PLZIP motifs also identify regions which share location similarities with DP-178 of HIV-1.

12. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN SIMIAN IMMUNODEFICIENCY VIRUS

[0234] Motif hits for Simian immunodeficiency Virus gp41 (AGM3 isolate; PC/Gene protein sequence name PENV_ SIVAG) are shown in FIG. 22. Motif 107x178x4 finds three hits including amino acids 566-593, 597-624, and 703-730.

The first two hits only have three amino acids between them and could probably be combined into one hit from 566-624 which would represent a DP107-like hit. Amino acids 703 to 730 would then represent a DP178-like hit. ALLMOTI5 also finds three hits including amino acids 556-628 (DP107-like), 651-699 (DP178-like), and 808-852 which represents the transmembrane spanning region. SIV also has one region from 655-692 with a high propensity to form a coiled coil as predicted by the Lupas algorithm. Both 107x178x4 and ALLMOTI5 motifs find the same region. SIV does not have any PLZIP motif hits in gp41.

[0235] The identification of DP178/DP107 analogs for a second SIV isolate (MM251) is demonstrated in the Example presented, below, in Section 19.

13. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178 LIKE SEQUENCES IN CANINE DISTEMPER VIRUS

[0236] Canine Distemper Virus (strain Onderstepoort) fusion glycoprotein F1 (PC/Gene Protein sequence name PVGLF_CDVO) has regions similar to Human RSV which are predicted to be DP107-like and DP178-like (FIG. 23). Motif 107x178x4 highlights one area just C-terminal to the fusion peptide at amino acids 252-293. Amino acids 252-286 are also predicted to be coiled coil using the Lupas algorithm. Almost 100 amino acids C-terminal to the first region is a DP178-like area at residues 340-367. ALLMOTI5 highlights three areas of interest including: amino acids 228-297, which completely overlaps both the Lupas prediction and the DP107-like 107x178x4 hit; residues 340-381, which overlaps the second 107x178x4 hit; and amino acids 568-602, which is DP178-like in that it is located just N-terminal to the transmembrane region. It also overlaps another region (residues 570-602) predicted by the Lupas method to have a high propensity to form a coiled coil. Several PLZIP motifs successfully identified areas of interest including P6 and P12LZIPC which highlight residues 336-357 and 336-361 respectively; P1 and P12LZIPC which find residues 398-414; and P12 and P23LZIPC which find residues 562-589 and 562-592 respectively.

14. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN NEWCASTLE DISEASE VIRUS

[0237] FIG. 24 shows the motif hits found in Newcastle Disease Virus (strain Australia-Victoria/32; PC Gene protein sequence name PVGLF_NDVA). Motif 107x178x4 finds two areas including a DP107-like hit at amino acids 151-178 and a DP178-like hit at residues 426-512. ALLMOTI5 finds three areas including residues 117-182, 231-272, and 426-512. The hits from 426-512 include a region which is predicted by the Lupas method to have a high coiled-coil propensity (460-503). The PLZIP motifs identify only one region of interest at amino acids 273-289 (P1 and 12LZIPC).

15. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN PARAINFLUENZA VIRUS

[0238] Both motifs 107x178x4 and ALLMOTI5 exhibit DP107-like hits in the same region, 115-182 and 117-182 respectively, of Human Parainfluenza Virus (strain NIH 47885; PC/Gene protein sequence name PVGLF_p13H4; (FIG. 25). In addition, the two motifs have a DP178-like hit just slightly C-terminal at amino acids 207-241. Both motifs also have DP178-like hits nearer the transmembrane region including amino acids 457-497 and 462-512 respectively. Several PLZIP motif hits are also observed including 283-303 (P5LZIPC), 283-310 (P12LZIPC), 453-474 (P6LZIPC), and 453-481 (P23LZIPC). The Lupas algorithm predicts that amino acids 122-176 may have a propensity to form a coiled-coil.

16. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES OF INFLUENZA A VIRUS

[0239] FIG. 26 illustrates the Lupas prediction for a coiled coil in Influenza A Virus (strain A/Aichi/2/68) at residues 379-436, as well as the motif hits for 107x178x4 at amino acids 387-453, and for ALLMOTI5 at residues 380-456. Residues 383-471 (38-125 of HA2) were shown by Carr and Kim to be an extended coiled coil when under acidic pH (Carr and Kim, 1993, Cell 73: 823-832). The Lupas algorithm predicts a coiled-coil at residues 379-436. All three methods successfully predicted the region shown to actually have coiled-coil structure; however, ALLMOTI5 predicted the greatest portion of the 88 residue stretch.

17. EXAMPLE: POTENTIAL RESPIRATORY SYNCYTIAL VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

[0240] In the Example presented herein, respiratory syncytial virus (RSV) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 11, above, were tested for anti-RSV

activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

17.1 MATERIALS AND METHODS

[0241] Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptides were synthesized according to the methods described, above, in Section 6.1. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

[0242] Anti-RSV antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of HEp2 cells acutely infected with RSV (i.e., cells which are infected with a multiplicity of infection of greater than 2) to fuse and cause syncytial formation on a monolayer of uninfected an uninfected line of Hep-2 cells. The lower the observed level of fusion, the greater the antiviral activity of the peptide was determined to be.

[0243] Uninfected confluent monolayers of Hep-2 cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics (penicillin/streptomycin; Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

[0244] To prepare Hep2 cells for addition to uninfected cells, cultures of acutely infected Hep2 cells were washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected Hep-2 cells.

[0245] The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Hep-2 cells, then adding peptides (at the dilutions described below) in 3% EMEM, and 100 acutely RSV-infected Hep2 cells per well. Wells were then incubated at 37°C for 48 hours.

[0246] After incubation, cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of either Crystal Violet stain or XTT. With respect to Crystal Violet, approximately 50μl 0.25% Crystal Violet stain in methanol were added to each well. The wells were rinsed immediately, to remove excess stain, and were allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

[0247] With respect to XTT (2,3-bis[2-Methoxy-4-nitro-5-sulfophenyl]-2H-tetrazolium-5-carboxyanilide inner salt), 50μl XTT (1mg/ml in RPMI buffered with 100mM HEPES, pH 7.2-7.4, plus 5% DMSO) were added to each well. The $OD_{450/690}$ was measured (after blanking against growth medium without cells or reagents, and against reagents) according to standard procedures.

[0248] Peptides: The peptides characterized in the study presented herein were:

1) peptides T-142 to T-155 and T-575, as shown in FIG. 27A, and peptides T-22 to T-27, T-68, T-334 and T-371 to T-375 and T-575, as shown in FIG. 27B;
2) peptides T-120 to T-141 and T-576, as shown in FIG. 27B, and peptides T-12, T-13, T-15, T-19, T-28 to T-30, T-66, T-69, T-70 and T-576, as shown in FIG. 27D; and
3) peptides T-67 and T-104 to T-119 and T-384, as shown in FIG. 28A, and peptides T-71, T-613 to T-617, T-662 to T-676 and T-730, as shown in FIG. 28B.

[0249] The peptides of group 1 represent portions of the RSV F2 protein DP178/107-like region. The peptides of group 2 represent portions of the RSV F1 protein DP107-like region. The peptides of groups 3 represent portions of the RSV F1 protein DP178-like region.

[0250] Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used. The IC_{50} data for each peptide represents the average of several experiments conducted utilizing that peptide.

17.2 RESULTS

[0251] The data summarized in FIGS. 27A-B and 28A-B represent antiviral and structural information obtained from peptides derived from the RSV F2 DP178/DP107-like F2 region (FIG. 27A-B), the RSV F1 DP-107-like region (FIG. 27C-D) and the RSV DP178-like F2 region (FIG. 28A-B).

[0252] As shown in FIGS. 27A-D, a number of the RSV DP178/DP107-like peptides exhibited a detectable level of antiviral activity. Peptides from the RSV DP178/DP107-like F2 region (FIG. 27A-B), for example, T-142 to T-145 and T-334 purfied peptides, exhibited detectable levels of antiviral activity, as evidenced by their IC_{50} values. Further, a number

of RSV F1 DP107-like peptides (FIG. 27C-D) exhibited a sizable level of antiviral activity as purified peptides, including, for example, peptides T-124 to T-127, T-131, T-135 and T-137 to T-139, as demonstrated by their low IC_{50} values. In addition, CD analysis FIG. 27A, 27C) reveals that many of the peptides exhibit some detectable level of helical structure.

[0253] The results summarized in FIG. 28A-B demonstrate that a number of DP178-like purified peptides exhibit a range of potent anti-viral activity. These peptides include, for example, T-67, T-104, T-105 and T-107 to T-119, as listed in FIG. 28A, and T-665 to T-669 and T-671 to T-673, as listed in FIG. 28B. In addition, some of the DP178-like peptides exhibited some level of helicity.

[0254] Thus, the computer assisted searches described, hereinabove, successfully identified viral peptide domains that represent highly promising anti-RSV antiviral compounds.

18. EXAMPLE: POTENTIAL HUMAN PARAINFLUENZA VIRUS TYPE 3 DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

[0255] In the Example presented herein, human parainfluenza virus type 3 (HPIV3) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 15, above, were tested for anti-HPIV3 activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

18.1 MATERIALS AND METHODS

[0256] Structural analyses: Structural analyses consisted of circular dichroism (CD) studies. The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

[0257] Anti-HPIV3 antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of Hep2 cells chronically infected with HPIV3 to fuse and cause syncytial formation on a monolayer of an uninfected line of CV-1W cells. The more potent the lower the observed level of fusion, the greater the antiviral activity of the peptide.

[0258] Uninfected confluent monolayers of CV-1W cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics/antimycotics (Gibco BRL Life Technologies Cat. No. 15040-017) added at 1%, and glutamine added at 1%.

[0259] To prepare Hep2 cells for addition to uninfected cells, cultures of chronically infected Hep2 cells were washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected CV-1W cells.

[0260] The antiviral assay was conducted by, first; removing all media from the wells containing uninfected CV-1W cells, then adding peptides (at the dilutions described below) in 3% EMEM, and 500 chronically HPIV3-infected Hep2 cells per well. Wells were then incubated at 37°C for 24 hours.

[0261] On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

[0262] Alternatively, instead of Crystal Violet analysis, cells were assayed with XTT, as described, avove, in Section 17.1.

[0263] Peptides: The peptides characterized in the study presented herein were:

1) Peptides 157 to 188, as shown in FIG. 29A, and peptides T-38 to T-40, T-42 to T-46 and T-582, as shown in FIG. 29B. These peptides are derived from the DP107 region of the HPIV3 F1 fusion protein (represented by HPF3 107, as shown in FIG. 29A); and

2) Peptides 189 to 210, as shown in FIG. 30A, and T-269, T-626, T-383 and T-577 to T-579, as shown in FIG. 30B. These peptides are primarily derived from the DP178 region of the HPIV3 F1 fusion protein (represented by HPF3 178, as shown in FIG. 30A). Peptide T-626 contains two mutated amino acid resides (represented by a shaded background). Additionally, peptide T-577 represents F1 amino acids 65-100, T-578 represents F1 amino acids 207-242 and T-579 represents F1 amino acids 273-309.

[0264] Each peptide was tested at 2-fold serial dilutions ranging from 500μg/ml to approximately 500ng/ml. For each

of the assays, a well containing no peptide was also used.

18.2 RESULTS

[0265] The data summarized in FIGS. 29A-B and 30A-B represent antiviral and structural information obtained from peptides derived from the HPIV3 fusion protein DP107-like region (FIG. 29A-B) and the HPIV3 fusion protein DP178-like region (FIG. 30A-B).

[0266] As shown in FIG. 29A-B, a number of the HPIV3 DP107-like peptides exhibited potent levels of antiviral activity. These peptides include, for example, peptides T-40, T-172 to T-175, T-178, T-184 and T-185.

[0267] The results summarized in FIG. 30A-B demonstrate that a number of the DP178-like peptides tested exhibit a range of anti-viral activity. These peptides include, for example, peptides 194 to 211, as evidenced by their low IC_{50} values. In fact, peptides 201 to 205 exhibit IC_{50} values in the nanogram/ml range. In addition, many of the DP178-like peptides exhibited some level of helicity.

[0268] Thus, the computer assisted searches described, hereinabove, have successfully identified viral peptide domains that represent highly promising anti-HPIV3 antiviral compounds.

19. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN IMMUNODEFICIENCY VIRUS

[0269] FIG. 31 represents search results for SIV isolate MM251 (PC/Gene® protein sequence PENV_SIVM2). Both 107x178x4 and ALLMOTI5 search motifs identified two regions with similarities to DP107 and/or DP178.

[0270] The peptide regions found by 107x178x4 were located at amino acid residues 156-215 and 277-289. The peptide regions found by ALLMOTI5 were located at amino acid residues 156-219 and 245-286. Both motifs, therefore, identify similar regions.

[0271] Interestingly, the first SIV peptide region (i.e., from amino acid residue 156 to approximately amino acid residue 219) correlates with a DP107 region, while the second region identified (i.e., from approximately amino acid residue 245 to approximately amino acid residue 289) correlates with the DP178 region of HIV. In fact, an alignment of SIV isolate MM251 and HIV isolate BRU, followed by a selection of the best peptide matches for HIV DP107 and DP178, reveals that the best matches are found within the peptide regions identified by the 107x178x4 and ALLMOTI5 search motifs.

[0272] It should be noted that a potential coiled-coil region at amino acid residues 242-282 is predicted by the Lupas program. This is similar to the observation in HIV in which the coiled-coil is predicted by the Lupas program to be in the DP178 rather than in the DP107 region. It is possible, therefore, that SIV may be similar to HIV in that it may contain a coiled-coil structure in the DP107 region, despite such a structure being missed by the Lupas algorithm. Likewise, it may be that the region corresponding to a DP178 analog in SIV may exhibit an undefined structure, despite the Lupas program's prediction of a coiled-coil structure.

20. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN EPSTEIN-BARR VIRUS

[0273] The results presented herein describe the identification of DP178/DP107 analogs within two different Epstein-Barr Virus proteins. Epstein-Barr is a human herpes virus which is the causative agent of, for example, infectious mononucleosis (IM), and is also associated with nasopharyngeal carcinomas (NPC), Burkitt's lymphoma and other diseases. The virus predominantly exists in the latent form and is activated by a variety of stimuli.

[0274] FIG. 32 depicts the search motif results for the Epstein-Barr Virus (Strain B95-8; PC/Gene® protein sequence PVGLB_EBV) glycoprotein gp110 precursor (gp115). The 107x178x4 motif identified two regions of interest, namely the regions covered by amino acid residues 95-122 and 631-658. One PZIP region was identified at amino acid residue 732-752 which is most likely a cytoplasmic region of the protein. The Lupas algorithm predicts a coiled-coil structure for amino acids 657-684. No ALLMOTI5 regions were identified.

[0275] FIG. 33 depicts the search motif results for the Zebra (or EB1) trans-activator protein (BZLF1) of the above-identified Epstein-Barr virus. This protein is a transcription factor which represents the primary mediator of viral reactivation. It is a member of the b-ZIP family of transcription factors and shares significant homology with the basic DNA-binding and dimerization domains of the cellular oncogenes c-fos and C/EBP. The Zebra protein functions as a homodimer.

[0276] Search results domonstrate that the Zebra protein exhibits a single region which is predicted to be either of DP107 or DP178 similarity, and is found between the known DNA binding and dimerization regions of the protein. Specifically, this region is located at amino acid residues 193-220, as shown in FIG. 33. The Lupas program predicted no coiled-coil regions.

21. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN MEASLES VIRUS

[0277] FIG. 34 illustrates the motif search results for the fusion protein F1 of measles virus, strain Edmonston (PC Gene® protein sequence PVGLF_MEASE), successfully identifying DP178/DP107 analogs.

[0278] The 107x178x4 motif identifies a single region at amino acid residues 228-262. The ALLMOTI5 search motif identifies three regions, including amino acid residues 116-184, 228-269 and 452-500. Three regions containing proline residues followed by a leucine zipper-like sequence were found beginning at proline residues 214, 286 and 451.

[0279] The Lupas program identified two regions it predicted had potential for coiled-coil structure, which include amino acid residues 141-172 and 444-483.

22. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN HEPATITIS B VIRUS

[0280] FIG. 35 depicts the results of a PZIP motif search conducted on the Hepatitis B virus subtype AYW. Two regions of interest within the major surface antigen precursor S protein were identified. The first lies just C-terminal to the proposed fusion peptide of the major surface antigen (Hbs) which is found at amino acid residues 174-191. The second region is located at amino acid residues 233-267. The Lupas program predicts no coiled-coil repeat regions.

[0281] In order to test the potential anti-HBV antiviral activity of these D178/DP107 analog regions, peptides derived from area around the analog regions are synthesized, as shown in FIG. 52A-B. These peptides represent one amino acid peptide "walks" through the putative DP178/DP107 analog regions. The peptides are synthesized according to standard Fmoc chemistry on Rinkamide MBHA resins to provide for carboxy terminal blockade (Chang, C.D. and Meinhofer, J., 1978, Int. J. Pept. Protein Res. 11:246-249; Fields, G.B. and Noble, R.L., 1990, Int. J. Pept. Protein Res. 35: 161-214). Follwing complete synthesis, the peptide amino-terminus is blocked through automated acetylation and the peptide is cleaved with trifluoroacetic acid (TFA) and the appropriate scavengers (King, D.S. et al., 1990, Int. J. Pept. Res. 36:255-266). After cleavage, the peptide is precipitated with ether and dried under vacuum for 24 hours.

[0282] The anti-HBV activity of the peptides is tested by utilizing standard assays to determine the test peptide concentration required to cause an acceptable (e.g., 90%) decrease in the amount of viral progeny formed by cells exposed to an HBV viral inoculum. Candidate antivial peptides are further characterized in model systems such as wood chuck tissue culture and animal sytems, prior to testing on humans.

23. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN MASON-PFIZER MONKEY VIRUS

[0283] The results depicted herein illustrate the results of search motifs conducted on the Simian Mason-Pfizer monkey virus. The motifs reveal DP178/DP107 analogs within the enveloped (TM) protein GP20, as shown in FIG. 36.

[0284] The 107x178x4 motifs identifies a region at amino acid residues 422-470. The ALLMOTI5 finds a region at amino acid residues 408-474. The Lupas program predicted a coiled-coil structure a amino acids 424-459.

24. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN BACTERIAL PROTEINS

[0285] The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to sequences present in proteins of a variety of bacterial species.

[0286] FIG. 37 depicts the search motif results for the Pseudomonas aeruginosa fimbrial protein (Pilin). Two regions were identified by motifs 107x178x4 and ALLMOTI5. The regions located at amino acid residues 30-67 and 80-144 were identified by the 107x178x4 motif. The regions at amino acid residues 30-68 and 80-125 were identified by the ALLMOTI5.

[0287] FIG. 38 depicts the search motif results for the Pseudomonas gonorrhoeae fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 66-97 was identified by the 107x178x4 motif. The region located at amino acid residues 66-125 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

[0288] FIG. 39 depicts the search motif results for the Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

[0289] FIG. 40 depicts the search motif results for the Staphylococcus aureus toxic shock syndrome Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

[0290] FIG. 41 summarizes the motif search results conducted on the Staphylococcus aureus enterotoxin Type E

protein. These results demonstrate the successful identification of DP178/DP107 analogs corresponding to peptide sequences within this protein, as described below.

[0291] The ALLMOTI5 motif identified a region at amino acid residues 22-27. The 107x178x4 motif identified two regions, with the first at amino acid residues 26-69 and the second at 88-115. A P12LZIPC motif search identified two regions, at amino acid residues 163-181 and 230-250.

[0292] The Lupas program predicted a region with a high propensity for coiling at amino acid residues 25-54. This sequence is completely contained within the first region identified by both ALLMOTI5 and 107x178x4 motifs.

[0293] FIG. 42 depicts the search motif results conducted on a second Staphylococcus aureus toxin, enterotoxin A. Two regions were identified by the ALLMOTI5 motif, at amino acid residues 22-70 and amino acid residues 164-205. The 107x178x4 motif found two regions, the first at amino acid residues 26-69 and the second at amino acid residues 165-192. A P23LZIPC motif search revealed a region at amino acid residues 216-250. No coiled-coil regions were predicted by the Lupas program.

[0294] FIG. 43 shows the motif search results conducted on the E. coli heat labile enterotoxin A protein, demonstrating that identification of DP178/DP107 analogs corresponding to peptides located within this protein. Two regions were identified by the ALLMOTI5 motif, with the first residing at amino acid residues 55-115, and the second residing at amino acid residues 216-254. The 107x178x4 motif identified a single region at amino acid residues 78-105. No coiled-coil regions were predicted by the Lupas program.

25. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS WITHIN VARIOUS HUMAN PROTEINS

[0295] The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to peptide sequences present within several different human proteins.

[0296] FIG. 44 illustrates the search motif results conducted on the human c-fos oncoprotein. The ALLMOTI5 motif identified a single region at amino acid residues 155-193. The 107x178x4 motif identified one region at amino acid residues 162-193. The Lupas program predicted a region at amino acid residues 148-201 to have coiled-coil structure.

[0297] FIG. 45 illustrates the search motif results conducted on the human lupus KU autoantigen protein P70. The ALLMOTI5 motif identified a single region at amino acid residues 229-280. The 107x178x4 motif identified one region at amino acid residues 235-292. The Lupas program predicted a region at amino acid residues 232-267 to have coiled-coil structure.

[0298] FIG. 46 illustrates the search motif results conducted on the human zinc finger protein 10. The ALLMOTI5 motif identified a single region at amino acid residues 29-81. The 107x178x4 motif identified one region at amino acid residues 29-56. A P23LZIPC motif search found a single region at amino acid residues 420-457. The Lupas program predicted no coiled-coil regions.

26. EXAMPLE: POTENTIAL MEASLES VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

[0299] In the Example presented herein, measles (MeV) virus DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 21, above, are tested for anti-MeV activity. Additionally, circular dichroism (CD) structural analyses are conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that none of the these peptides exhibit a substantial helical character.

26.1 MATERIALS AND METHODS

[0300] Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

[0301] Anti-MeV antiviral activity syncytial reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of Vero cells acutely infected with MeV (i.e., cells which are infected with a multiplicity of infection of 2-3) to fuse and cause syncytial formation on a monolayer of an uninfected line of Vero cells. The more potent the peptide, the lower the observed level of fusion, the greater the antiviral activity of the peptide.

[0302] Uninfected confluent monolayers of Vero cells were grown in microtiter wells in 10% FBS EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 10%, antibiotics/antimycotics (Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

[0303] To prepare acutely infected Vero cells for addition to the uninfected cells, cultures of acutely infected Vero cells

were washed twice with HBSS (Bio Whittaker Cat. No. 10-543F) and cell monolayers were removed with trypsin (Bio Whittaker Cat. No. 17-161E). Once cells detached, media was added, any remaining clumps of cells were dispersed, and hemacytometer cell counts were performed.

[0304] The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and 50-100 acutely MeV-infected Vero cells per well. Wells were then incubated at 37°C for a maximum of 18 hours.

[0305] On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

[0306] Anti-MeV antiviral activity plaque reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of MeV to infect permissive, uninfected Vero cells, leading to the infected cells' fusing with uninfected cells to produce syncytia. The lower the observed level of syncytial formation, the greater the antiviral activity of the peptide.

[0307] Monolayers of uninfected Vero cells are grown as described above.

[0308] The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and MeV stock virus at a final concentration of 30 plaque forming units (PFU) per well. Wells were then incubated at 37°C for a minimum of 36 hours and a maximum of 48 hours.

[0309] On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

[0310] Peptides: The peptides characterized in the study presented herein were peptides T-252A0 to T-256A0, T-257B1/C1, and T-258B1 to T-265B0, and T-266A0 to T-268A0, as shown in FIG. 47. These peptides represent a walk through the DP178-like region of the MeV fusion protein.

[0311] Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

26.2 RESULTS

[0312] The data summarized in FIG. 47 represents antiviral and structural information obtained via "peptide walks" through the DP178-like region of the MeV fusion protein.

[0313] As shown in FIG. 47, the MeV DP178-like peptides exhibited a range of antiviral activity as crude peptides. Several of these peptides were chosen for purification and further antiviral characterization. The IC_{50} values for such peptides were determined, as shown in FIG. 47, and ranged from 1.35μg/ml (T-257B1/C1) to 0.072μg/ml (T-265B1). None of the DP178-like peptides showed, by CD analysis, a detectable level of helicity.

[0314] Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-MeV antiviral compounds.

27. EXAMPLE: POTENTIAL SIV DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

[0315] In the Example presented herein, simian immunodeficiency virus (SIV) DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9, 12 and 19, above, were tested for anti-SIV activity. It is demonstrated that several of the identified peptides exhibit potent antiviral capability.

27.1 MATERIALS AND METHODS

[0316] Anti-SIV antiviral assays: The assay utilized herein were as reported in Langolis et al. (Langolis, A.J. et al., 1991, AIDS Research and Human Retroviruses 7:713-720).

[0317] Peptides: The peptides characterized in the study presented herein were peptides T-391 to T-400, as shown in FIG. 48. These peptides represent a walk through the DP178-like region of the SIV TM protein.

[0318] Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

27.2 RESULTS

[0319] The data summarized in FIG. 48 represents antiviral information obtained via "peptide walks" through the

DP178-like region of the SIV TM protein.

[0320] As shown in FIG. 48, peptides T-391 to T-400 were tested and exhibited a potent antiviral activity as crude peptides.

[0321] Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-SIV antiviral compounds.

28. EXAMPLE: ANTI-VIRAL ACTIVITY OF DP107 AND DP-178 PEPTIDE TRUNCATIONS AND MUTATIONS

[0322] The Example presented in this Section represents a study of the antiviral activity of DP107 and DP178 truncations and mutations. It is demonstrated that several of these DP107 and DP178 modified peptides exhibit substantial antiviral activity.

28.1 MATERIALS AND METHODS

[0323] Anti-HIV assays: The antiviral assays performed were as those described, above, in Section 6.1. Assays utilized HIV-1/IIIb and/or HIV-2 NIHZ isolates. Purified peptides were used, unless otherwise noted in FIGS. 49A-C.

[0324] Peptides: The peptides characterized in the study presented herein were:

1) FIGS. 49A-C present peptides derived from the region around and containing the DP178 region of the HIV-1 BRU isolate. Specifically, this region spanned from gp41 amino acid residue 615 to amino acid residue 717. The peptides listed contain truncations of this region and/or mutations which vary from the DP178 sequence amino acid sequence. Further, certain of the peptides have had amino- and/or carboxy-terminal groups either added or removed, as indicated in the figures; and

2) FIG. 50. presents peptides which represent truncations of DP107 and/or the gp41 region surrounding the DP107 amino acid sequence of HIV-1 BRU isolate. Certain of the peptides are unblocked or biotinylated, as indicated in the figure.

[0325] Blocked peptides contained an acyl N-terminus and an amido C-terminus.

28.2 RESULTS

[0326] Anti-HIV antiviral data was obtained with the group 1 DP178-derived peptides listed in FIG. 49A-C. The full-length, non-mutant DP178 peptide (referred to in FIG. 49A-C as T20) results shown are for 4ng/ml.

[0327] In FIG. 49A, a number of the DP178 truncations exhibited a high level of antiviral activity, as evidenced by their low IC_{50} values. These include, for example, test peptides T-50, T-624, T-636 to T-641, T-645 to T-650, T-652 to T-654 and T-656. T-50 represents a test peptide which contains a point mutation, as indicated by the residue's shaded background. The HIV-1-derived test peptides exhibited a distinct strain-specific antiviral activity, in that none of the peptides tested on the HIV-2 NIHZ isolate demonstrated appreciable antti-HIV-2 antiviral activity.

[0328] Among the peptides listed in FIG. 49B, are test peptides representing the amino (T-4) and carboxy (T-3) terminal halves of DP178 were tested. The amino terminal peptide was not active (IC_{50}>400μg/ml) whereas the carboxy terminal peptide showed potent antiviral activity (IC_{50}= 3μg/ml). A number of additional test peptides also exhibited a high level of antiviral activity. These included, for example, T-61/T-102, T-217 to T-221, T-235, T-381, T-677, T-377, T-590, T-378, T-591, T-271 to T-272, T-611, T-222 to T-223 and T-60/T-224. Certain of the antiviral peptides contain point mutations and/or amino acid residue additions which vary from the DP178 amino acid sequence.

[0329] In FIG. 49C, point mutations and/or amino and/or carboxy-terminal modifications are introduced into the DP178 amino acid sequence itself. As shown in the figure, the majority of the test peptides listed exhibit potent antiviral activity.

[0330] Truncations of the DP107 peptide (referred to in IG. 50 as T21) were also produced and tested, as shown in FIG. 50. FIG. 50 also presents data concerning blocked and unblocked peptides which contain additional amino acid residues from the gp41 region in which the DP107 sequence resides. Most of these peptides showed antiviral activity, as evidenced by their low IC_{50} values.

[0331] Thus, the results presented in this Section demonstrate that not only do the full length DP107 and DP178 peptides exhibit potent antiviral activity, but truncations and/or mutant versions of these peptides can also possess substantial antiviral character.

29: EXAMPLE: POTENTIAL EPSTEIN-BARR DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

[0332] In the Example presented herein, peptides derived from the Epstein-Barr (EBV) DP-178/DP107 analog region

of the Zebra protein identified, above, in the Example presented in Section 20 are described and tested for anti-EBV activity. It is demonstrated that among these peptides are ones which exhibit potential anti-viral activity.

29.1 MATERIALS AND METHODS

[0333] Electrophoretic Mobility Shift Assays (EMSA): Briefly, an EBV Zebra protein was synthesized utilizing SP6 RNA polymerase in vitro transcription and wheat germ in vitro translation systems (Promega Corporation recommendations; Butler, E.T. and Chamberlain, M.J., 1984, J. Biol. Chem. 257:5772; Pelham, H.R.B. and Jackson, R.J., 1976, Eur. J. Biochem. 67:247). The in vitro translated Zebra protein was then preincubated with increasing amounts of peptide up to 250 ng/ml prior to the addition of 10,000 to 20,000 c.p.m. of a ^{32}P-labeled Zebra response element DNA fragment. After a 20 minute incubation in the presence of the response element, the reaction was analyzed on a 4% non-denaturing polyacrylamide gel, followed by autoradiography, utilizing standard gel-shift procedures. The ability of a test peptide to prevent Zebra homodimer DNA binding was assayed by the peptide's ability to abolish the response element gel migration retardation characteristic of a protein-bound nucleic acid molecule.

[0334] Peptides: The peptides characterized in this study represent peptide walks through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. Specifically, the peptide walks covered the region from amino acid residue 173 to amino acid residue 246 of the EBV Zebra protein.

[0335] Each of the tested peptides were analyzed at a range of concentrations, with 150ng/ml being the lowest concentration at which any of the peptides exerted an inhibitory effect.

29.2 RESULTS

[0336] The EBV Zebra protein transcription factor contains a DP178/DP107 analog region, as demonstrated in the Example presented, above, in Section 20. This protein appears to be the primary factor responsible for the reactivation capability of the virus. A method by which the DNA-binding function of the Zebra virus may be abolished may, therefore, represent an effective antiviral technique. In order to identify potential anti-EBV DP178/DP107 peptides, therefore, peptides derived from the region identified in Section 20, above, were tested for their ability to inhibit Zebra protein DNA binding.

[0337] The test peptides' ability to inhibit Zebra protein DNA binding was assayed via the EMSA assays described, above, in Section 28.1. The data summarized in FIG. 51A-B presents the results of EMSA assays of the listed EBV test peptides. These peptides represent one amino acid "walks" through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. As shown in FIG. 51A-B, the region from which these peptides' are derived lies from EBV Zebra protein amino acid residue 173 to 246. A number of the test peptides which were assayed exhibited an ability to inhibit Zebra protein homodimer DNA binding, including 439, 441, 444 and 445.

[0338] Those peptides which exhibit an ability to inhibit Zebra protein DNA binding represent potential anti-EBV antiviral compounds whose ability to inhibit EBV infection can be further characterized.

Claims

1. An isolated HIV-1 or HIV-2 peptide having the formula:

X-NKSLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQ
QEKNEQELLELDKWASLWNWF-Z;
X-SLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQ-Z;
X-LEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQE-Z;
X-EQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEK-Z;
X-QIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKN-Z;
X-IWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNE-Z;
X-WNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQ-Z;
X-NNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQE-Z;
X-NMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQEL-Z;
X-MTWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z;
X-TWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z;
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLEL-Z;
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z;
X-WMEWDREINNYTSLIGSLIEESQNQQEKNEQELLE-Z;
X-MEWDREINNYTSLIHSLIEESQNQQEKNEQELLELD-Z;
X-EWDREINNYTSLIHSLIEESQNQQEKNEQELLELDK-Z;
X-WDREINNYTSLIHSLIEESQNQQEKNEQELLELDKW-Z;
X-DREINNYTSLIHSLIEESQNQQEKNEQELLELDKWA-Z;
X-REINNYTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z;
X-EINNYTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z;
X-INNYTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z;
X-NYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNITNWLWLIKFI-Z;
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFN-Z;
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNI-Z;
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWFNIT-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNAF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLANWF-Z;
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLQLDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNQQELLQLDKWASLWNWF-Z;
X-YTSLIHSLQEESQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEQSQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIQESQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIQSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLFNFF-Z;
X-YTSLIHSLIEESQNLQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKLEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLEFDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASPWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNSF-Z; or
X-LRAIEAQQHLLQLTVWQIKQLQARILAV-Z;

in which:

amino acid residues are presented by the single-letter code;
X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group;

and Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group.

2. An isolated respiratory syncytial virus peptide having the formula:

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z;
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z;
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z;
X-VAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVS-Z;
X-AVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSV-Z;
X-VSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVL-Z;
X-SKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLT-Z;
X-KVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLTS-Z;
X-LEGEVNKIKSALLSTNKAVVSLSNGVSVLTSKVLD-Z;
X-GEVNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLK-Z;
X-EVNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z;
X-VNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z;
X-NKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z;
X-KIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z;
X-IKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z;
X-KSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z;
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z;
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z;
X-FDASISQVNEKINQSLAFIRKSDELLHNVNA-Z; or
X-FDASISQVNEKINQSLAFIRKSDELL-Z;

in which:

amino acid residues are presented by the single-letter code;
X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group; and
Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group.

3. An isolated influenza A peptide having the formula:

X-QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQDLEKYVEDTKIDL
WSYNAELLVALENQHTI-Z, or
X-AADLKSTQAAIDQINGKLNRVIEKTNEKFHQIEKEF
SEVEGRIQDLEKYVEDTKIDLWSYNAELLVALENQHTIDLT-Z, in which:

amino acid residues are presented by the single-letter code;
X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group; and
Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group.

4. An isolated Epstein-Barr virus peptide having the formula:

X-SELEIKRYKNRVASKRKCRAKFKQLLQHYREVAAAK-Z;
X-CRAKFKQLLQHYREVAAAKSSENDRLRLLLKQMCP-Z;
X-AKFKQLLQHYREVAAAKSSENDRLRLLLKQMCPSL-Z;
X-KQLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVD-Z; or
X-QLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVDS-Z;

in which:

amino acid residues are presented by the single-letter code;
X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group; and
Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group.

5. An isolated measles virus peptide having the formula:

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEDAKELL-Z;
X-HRIDLGPPISLERLDVGTNLGNAIAKLEDAKELLE-Z;
X-RIDLGPPISLERLDVGTNLGNAIAKLEDAKELLES-Z;
X-IDLGPPISLERLDVGTNLGNAIAKLEDAKELLESS-Z;
X-DLGPPISLERLDVGTNLGNAIAKLEDAKELLESSD-Z;

X-LGPPISLERLDVGTNLGNAIAKLEDAKELLESSDQ-Z;
X-GPPISLERLDVGTNLGNAIAKLEDAKELLESSDQI-Z;
X-PPISLERLDVGTNLGNAIAKLEDAKELLESSDQIL-Z;
X-PISLERLDVGTNLGNAIAKLEDAKELLESSDQILR-Z;
X-SLERLDVGTNLGNAIAKLEDAKELLESSDQILRSM-Z; or
X-LERLDVGTNLGNAIAKLEDAKELLESSDQILRSMK-Z;

in which:

amino acid residues are presented by the single-letter code;
X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group; and
Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group.

6. An isolated hepatitis B virus peptide having the formula:

X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQSP-Z;
X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGT-Z;
X-LLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTT-Z;
X-LVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTV-Z;
X-LQAGFFLLTRILTIPQSLDSWWTSLNGLGGTTVCL-Z;
X-QAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLG-Z;
X-AGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQ-Z;
X-GFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQN-Z;
X-FFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNS-Z;
X-FLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQ-Z;
X-LLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQS-Z;
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP
LIPGSSTSTGPCRTCMTT-Z;
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML-Z;
X-GYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLP-Z;
X-YRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPV-Z;
X-RWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVC-Z;
X-WMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP-Z;
X-MCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPL-Z;
X-CLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLI-Z;
X-LRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIP-Z;
X-RRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPG-Z;
X-RFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGS-Z;
X-FIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSS-Z;
X-IIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSST-Z;
X-IFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTT-Z;
X-FLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTS-Z;
X-LFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTST-Z;

X-FILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTG-Z;
X-ILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGP-Z;
X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPC-Z;
X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCR-Z;
X-LCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRT-Z;
X-CLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTC-Z;
X-LIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCM-Z; or
X-IFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z;

in which:

amino acid residues are presented by the single-letter code;
X comprises an amino group, an acetyl group, a 9-fluorenylmethoxy-carbonyl group, a hydrophobic group, or a macromolecular carrier group; and
Z comprises a carboxyl group, an amido group, a hydrophobic group, or a macromolecular carrier group.

7. Use of a peptide as claimed in claim 1, in the manufacture of a medicament for the treatment of Human Immuno-Deficiency Virus type 1 or type 2.

8. Use of a peptide as claimed in claim 2 in the manufacture of a medicament for the treatment of Respiratory Syncytial Virus.

9. Use of a peptide as claimed in claim 3 in the' manufacture of a medicament for the treatment of Influenza type A.

10. Use of a peptide as claimed in claim 4 in the manufacture of a medicament for the treatment of Epstein-Barr virus.

11. Use of a peptide as claimed in claim 5 in the manufacture of a medicament for the treatment of measles.

12. Use of a peptide as claimed in claim 6 in the manufacture of a medicament for the treatment of Hepatitis B virus.

Patentansprüche

1. Isoliertes HIV-1- oder HIV-2-Peptid mit der Formel:

X-NKSLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQ
QEKNEQELLELDKWASLWNWF-Z;
X-SLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQ-Z;
X-LEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQE-Z;
X-EQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEK-Z;
X-QIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKN-Z;
X-IWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNE-Z;
X-WNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQ-Z;
X-NNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQE-Z;
X-NMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQEL-Z;
X-MTWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z;
X-TWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z;
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLEL-Z;
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z;
X-WMEWDREINNYTSLIGSLIEESQNQQEKNEQELLE-Z;
X-MEWDREINNYTSLIHSLIEESQNQQEKNEQELLELD-Z;
X-EWDREINNYTSLIHSLIEESQNQQEKNEQELLELDK-Z;
X-WDREINNYTSLIHSLIEESQNQQEKNEQELLELDKW-Z;
X-DREINNYTSLIHSLIEESQNQQEKNEQELLELDKWA-Z;
X-REINNYTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z;
X-EINNYTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z;
X-INNYTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z;
X-NYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNITNWLWLIKFI-Z;
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFN-Z;
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNI-Z;
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWFNIT-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNAF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLANWF-Z;
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLQLDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNQQELLQLDKWASLWNWF-Z;
X-YTSLIHSLQEESQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEQSQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIQESQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIQSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLFNFF-Z;
X-YTSLIHSLIEESQNLQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKLEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLEFDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASPWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNSF-Z; oder
X-LRAIEAQQHLLQLTVWQIKQLQARILAV-Z;

worin

Aminosäurereste durch den Ein-Buchstaben-Code dargestellt sind,
X eine Aminogruppe, eine Acetylgruppe, eine 9-Fluorenylmethoxycarbonylgruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst und
Z eine Carboxylgruppe, eine Amidogruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst.

2. Isoliertes respiratorisches Syncytialviruspeptid mit der Formel:

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z;
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z;
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z;
X-VAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVS-Z;
X-AVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSV-Z;
X-VSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVL-Z;
X-SKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLT-Z;
X-KVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLTS-Z;
X-LEGEVNKIKSALLSTNKAVVSLSNGVSVLTSKVLD-Z;
X-GEVNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLK-Z;
X-EVNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z;
X-VNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z;
X-NKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z;
X-KIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z;
X-IKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z;
X-KSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z;
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z;
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z;
X-FDASISQVNEKINQSLAFIRKSDELLHNVNA-Z; oder
X-FDASISQVNEKINQSLAFIRKSDELL-Z;

worin
Aminosäurereste durch den Ein-Buchstaben-Code dargestellt sind,
X eine Aminogruppe, eine Acetylgruppe, eine 9-Fluorenylmethoxycarbonylgruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst und
Z eine Carboxylgruppe, eine Amidogruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst.

3. Isoliertes Influenza-A-Peptid mit der Formel:

X-QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQDLEKYVEDTKIDL
WSYNAELLVALENQHTI-Z, oder
X-AADLKSTQAAIDQINGKLNRVIEKTNEKFHQIEKEF
SEVEGRIQDLEKYVEDTKIDLWSYNAELLVALENQHTIDLT-Z,

worin
Aminosäurereste durch den Ein-Buchstaben-Code dargestellt sind,
X eine Aminogruppe, eine Acetylgruppe, eine 9-Fluorenylmethoxycarbonylgruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst und
Z eine Carboxylgruppe, eine Amidogruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst.

4. Isoliertes Epstein-Barr-Virus-Peptid mit der Formel:

X-SELEIKRYKNRVASKRKCRAKFKQLLQHYREVAAAK-Z;
X-CRAKFKQLLQHYREVAAAKSSENDRLRLLLKQMCP-Z;
X-AKFKQLLQHYREVAAAKSSENDRLRLLLKQMCPSL-Z;
X-KQLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVD-Z; oder
X-QLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVDS-Z;

worin
Aminosäurereste durch den Ein-Buchstaben-Code dargestellt sind,
X eine Aminogruppe, eine Acetylgruppe, eine 9-Fluorenylmethoxycarbonylgruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst und
Z eine Carboxylgruppe, eine Amidogruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst.

5. Isoliertes Masemviruspeptid mit der Formel:

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEDAKELL-Z;
X-HRIDLGPPISLERLDVGTNLGNAIAKLEDAKELLE-Z;
X-RIDLGPPISLERLDVGTNLGNAIAKLEDAKELLES-Z;
X-IDLGPPISLERLDVGTNLGNAIAKLEDAKELLESS-Z;
X-DLGPPISLERLDVGTNLGNAIAKLEDAKELLESSD-Z;

X-LGPPISLERLDVGTNLGNAIAKLEDAKELLESSDQ-Z;
X-GPPISLERLDVGTNLGNAIAKLEDAKELLESSDQI-Z;
X-PPISLERLDVGTNLGNAIAKLEDAKELLESSDQIL-Z;
X-PISLERLDVGTNLGNAIAKLEDAKELLESSDQILR-Z;
X-SLERLDVGTNLGNAIAKLEDAKELLESSDQILRSM-Z; oder
X-LERLDVGTNLGNAIAKLEDAKELLESSDQILRSMK-Z;

worin:

Aminosäurereste durch den Ein-Buchstaben-Code dargestellt sind,
X eine Aminogruppe, eine Acetylgruppe, eine 9-Fluorenylmethoxycarbonylgruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst und
Z eine Carboxylgruppe, eine Amidogruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst.

6. Isoliertes Hepatitis-B-Viruspeptid mit der Formel:

X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQSP-Z;
X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGT-Z;
X-LLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTT-Z;
X-LVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTV-Z;
X-LQAGFFLLTRILTIPQSLDSWWTSLNGLGGTTVCL-Z;
X-QAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLG-Z;
X-AGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQ-Z;
X-GFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQN-Z;
X-FFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNS-Z;
X-FLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQ-Z;
X-LLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQS-Z;
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP
LIPGSSTSTGPCRTCMTT-Z;
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML-Z;
X-GYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLP-Z;
X-YRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPV-Z;
X-RWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVC-Z;
X-WMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP-Z;
X-MCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPL-Z;
X-CLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLI-Z;
X-LRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIP-Z;
X-RRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPG-Z;
X-RFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGS-Z;
X-FIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSS-Z;
X-IIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSST-Z;
X-IFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTT-Z;
X-FLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTS-Z;
X-LFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTST-Z;

X-FILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTG-Z;
X-ILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGP-Z;
X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPC-Z;
X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCR-Z;
X-LCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRT-Z;
X-CLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTC-Z;
X-LIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCM-Z; oder
X-IFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z;

worin:

Aminosäurereste durch den Ein-Buchstaben-Code dargestellt sind,
X eine Aminogruppe, eine Acetylgruppe, eine 9-Fluorenylmethoxycarbonylgruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst und
Z eine Carboxylgruppe, eine Amidogruppe, eine hydrophobe Gruppe oder eine makromolekulare Trägergruppe umfasst.

7. Verwendung eines Peptids, wie in Anspruch 1 beansprucht, bei der Herstellung eines Medikaments zur Behandlung des menschlichen Immunschwächevirus (HIV-Virus) vom Typ 1 oder Typ 2.

8. Verwendung eines Peptids, wie in Anspruch 2 beansprucht, zur Herstellung eines Medikaments zur Behandlung eines respiratorischen Syncytialvirus.

9. Verwendung eines Peptids, wie in Anspruch 3 beansprucht, zur Herstellung eines Medikaments zur Behandlung der Influenza Typ A.

10. Verwendung eines Peptids, wie in Anspruch 4 beansprucht, zur Herstellung eines Medikaments zur Behandlung des Epstein-Barr-Virus.

11. Verwendung eines Peptids, wie in Anspruch 5 beansprucht, bei der Herstellung eines Medikaments zur Behandlung von Masern.

12. Verwendung eines Peptids, wie in Anspruch 6 beansprucht, bei der Herstellung eines Medikaments zur Behandlung des Hepatitis B-Virus.

Revendications

1. Peptide isolé du VIH 1 ou du VIH 2, ayant la formule :

X-NKSLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQ
QEKNEQELLELDKWASLWNWF-Z;
X-SLEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQ-Z;
X-LEQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQE-Z;
X-EQIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEK-Z;
X-QIWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKN-Z;
X-IWNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNE-Z;
X-WNNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQ-Z;
X-NNMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQE-Z;
X-NMTWMEWDREINNYTSLIHSLIEESQNQQEKNEQEL-Z;
X-MTWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z;
X-TWMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z;
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLEL-Z;
X-WMEWDREINNYTSLIHSLIEESQNQQEKNEQELLE-Z;
X-WMEWDREINNYTSLIGSLIEESQNQQEKNEQELLE-Z;
X-MEWDREINNYTSLIHSLIEESQNQQEKNEQELLELD-Z;
X-EWDREINNYTSLIHSLIEESQNQQEKNEQELLELDK-Z;
X-WDREINNYTSLIHSLIEESQNQQEKNEQELLELDKW-Z;
X-DREINNYTSLIHSLIEESQNQQEKNEQELLELDKWA-Z;
X-REINNYTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z;
X-EINNYTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z;
X-INNYTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z;
X-NYTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNITNWLWLIKFI-Z;
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWFN-Z;
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWFNI-Z;
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWFNIT-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNAF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLANWF-Z;
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLQLDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNQQELLQLDKWASLWNWF-Z;
X-YTSLIHSLQEESQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEQSQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIQESQNQQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIQSLIEESQNQQEKNEQQLLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLFNFF-Z;
X-YTSLIHSLIEESQNLQEKNEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKLEQELLELDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLEFDKWASLWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASPWNWF-Z;
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNSF-Z; OU
X-LRAIEAQQHLLQLTVWQIKQLQARILAV-Z;

dans laquelle :

les résidus acides aminés sont représentés par le code à une seule lettre ;
X comporte un groupe amino, un groupe acétyle, un groupe 9-fluorénylméthoxycarbonyle, un groupe hydrophobe ou un groupe porteur macromoléculaire ; et
Z comporte un groupe carboxyle, un groupe amido, un groupe hydrophobe ou un groupe porteur macromoléculaire.

2. Peptide isolé du virus respiratoire syncytial, ayant la formule :

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z;
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z;
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z;
X-VAVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVS-Z;
X-AVSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSV-Z;
X-VSKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVL-Z;
X-SKVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLT-Z;
X-KVLHLEGEVNKIKSALLSTNKAVVSLSNGVSVLTS-Z;
X-LEGEVNKIKSALLSTNKAVVSLSNGVSVLTSKVLD-Z;
X-GEVNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLK-Z;
X-EVNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z;
X-VNKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z;
X-NKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z;
X-KIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z;
X-IKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z;
X-KSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z;
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z;
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z;
X-FDASISQVNEKINQSLAFIRKSDELLHNVNA-Z; ou
X-FDASISQVNEKINQSLAFIRKSDELL-Z;

dans laquelle :

les résidus acides aminés sont désignés par le code à une seule lettre ;
X comporte un groupe amino, un groupe acétyle, un groupe 9-fluorénylméthoxycarbonyle, un groupe hydrophobe ou un groupe porteur macromoléculaire ; et
Z comporte un groupe carboxyle, un groupe amido, un groupe hydrophobe ou un groupe porteur macromoléculaire.

3. Peptide isolé de l'influenzavirus A, ayant la formule

X-QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQDLEKYVEDTKIDL
WSYNAELLVALENQHTI-Z, ou
X-AADLKSTQAAIDQINGKLNRVIEKTNEKFHQIEKEF
SEVEGRIQDLEKYVEDTKIDLWSYNAELLVALENQHTIDLT-Z,

dans laquelle :

les résidus acides aminés sont désignés par le code à une seule lettre :
X comporte un groupe amino, un groupe acétyle; un groupe 9-fluorénylméthoxycarbonyle, un groupe hydrophobe ou un groupe porteur macromoléculaire ; et
Z comporte un groupe carboxyle, un groupe amido, un groupe hydrophobe ou un groupe porteur macromoléculaire.

4. Peptide isolé du virus Epstein-Barr, ayant la formule :

X-SELEIKRYKNRVASKRKCRAKFKQLLQHYREVAAAK-Z;
X-CRAKFKQLLQHYREVAAAKSSENDRLRLLLKQMCP-Z;
X-AKFKQLLQHYREVAAAKSSENDRLRLLLKQMCPSL-Z;
X-KQLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVD-Z; ou
X-QLLQHYREVAAAKSSENDRLRLLLKQMCPSLDVDS-Z;

dans laquelle :

les résidus acides aminés sont désignés par le code à une seule lettre ;
X comporte un amino group, un groupe acétyle, un groupe 9-fluorénylméthoxycarbonyle, un groupe hydrophobe ou un groupe porteur macromoléculaire ; et
Z comporte un groupe carboxyle, un groupe amido, un groupe hydrophobe ou un groupe porteur macromoléculaire.

5. Peptide isolé du virus de la rubéole, ayant la formule

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEDAKELL-Z;
X-HRIDLGPPISLERLDVGTNLGNAIAKLEDAKELLE-Z;
X-RIDLGPPISLERLDVGTNLGNAIAKLEDAKELLES-Z;
X-IDLGPPISLERLDVGTNLGNAIAKLEDAKELLESS-Z;
X-DLGPPISLERLDVGTNLGNAIAKLEDAKELLESSD-Z;

X-LGPPISLERLDVGTNLGNAIAKLEDAKELLESSDQ-Z;
X-GPPISLERLDVGTNLGNAIAKLEDAKELLESSDQI-Z;
X-PPISLERLDVGTNLGNAIAKLEDAKELLESSDQIL-Z;
X-PISLERLDVGTNLGNAIAKLEDAKELLESSDQILR-Z;
X-SLERLDVGTNLGNAIAKLEDAKELLESSDQILRSM-Z; ou
X-LERLDVGTNLGNAIAKLEDAKELLESSDQILRSMK-Z;

dans laquelle :

les résidus acides aminés sont désignés par le code à une seule lettre ;
X comporte un groupe amino, un groupe acétyle, un groupe 9-fluorénylméthoxycarbonyle, un groupe hydrophobe ou un groupe porteur macromoléculaire ; et
Z comporte un groupe carboxyle, un groupe amido, un groupe hydrophobe ou un groupe porteur macromoléculaire.

6. Peptide isolé du virus de l'hépatite B, ayant la formule :

X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQSP-Z;
X-PLLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGT-Z;
X-LLVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTT-Z;
X-LVLQAGFFLLTRILTIPQSLDSWWTSLNFLGGTTV-Z;
X-LQAGFFLLTRILTIPQSLDSWWTSLNGLGGTTVCL-Z;
X-QAGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLG-Z;
X-AGFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQ-Z;
X-GFFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQN-Z;
X-FFLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNS-Z;
X-FLLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQ-Z;
X-LLTRILTIPQSLDSWWTSLNFLGGTTVCLGQNSQS-Z;
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP
LIPGSSTSTGPCRTCMTT-Z;
X-PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML-Z;
X-GYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLP-Z;
X-YRWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPV-Z;
X-RWMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVC-Z;
X-WMCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCP-Z;
X-MCLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPL-Z;
X-CLRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLI-Z;
X-LRRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIP-Z;
X-RRFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPG-Z;
X-RFIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGS-Z;
X-FIIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSS-Z;
X-IIFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSST-Z;
X-IFLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTT-Z;
X-FLFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTS-Z;
X-LFILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTST-Z;

X-FILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTG-Z;
X-ILLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGP-Z;
X-LLLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPC-Z;
X-LLCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCR-Z;
X-LCLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRT-Z;
X-CLIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTC-Z;
X-LIFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCM-Z; ou
X-IFLLVLLDYQGMLPVCPLIPGSSTTSTGPCRTCMT-Z;

dans laquelle :

les résidus acides aminés sont désignés par le code à une seule lettre ;
X comporte un groupe amino, un groupe acétyle, un groupe 9-fluorénylméthoxycarbonyle, un groupe hydrophobe ou groupe porteur macromoléculaire ; et
Z comporte un groupe carboxyle, un groupe amido, groupe hydrophobe ou un groupe porteur macromoléculaire.

7. Utilisation d'un peptide selon la revendication 1 dans la fabrication d'un médicament pour le traitement du virus de l'immunodéficience humaine de type I ou de type 2.

8. Utilisation d'un peptide selon la revendication 2 dans la fabrication d'un médicament pour le traitement du virus respiratoire syncytial.

9. Utilisation d'un peptide selon la revendication 3 dans la fabrication d'un médicament pour le traitement de l'influen-

zavirus de type A.

10. Utilisation d'un peptide selon la revendication 4 dans la fabrication d'un médicament pour le traitement du virus Epstein-Barr.

11. Utilisation d'un peptide selon la revendication 5 dans la fabrication d'un médicament pour le traitement de la rougeole.

12. Utilisation d'un peptide selon la revendication 6 dans la fabrication d'un médicament pour le traitement du virus de l'hépatite B.

HIV1LAI (DP-178; SEQ ID:1)	YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF
HIV1SF2 (DP-185; SEQ ID:3)	YTNTIYNLLEESQNQQEKNEQELLELDKWASLWNWF
HIV1RF (SEQ ID:4)	YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF
HIV1MN (SEQ ID:5)	YTSLIYSLLEKSQTQQEKNEQELLELDKWASLWNWF
HIV2ROD (SEQ ID:6)	LEANISKSLEQAQIQQEKNMYELQKLNSWDIFGNWF
HIV2NIHZ (SEQ ID:7)	LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL
DP180 (SEQ ID:2)	SSESFTLLEQWNNWKLQLAEQWLEQINEKHYLEDIS
DP118 (SEQ ID:10)	QQLLDVVKRQQEMLRLTVWGTKNLQARVTAIEKYLKDQ
DP125 (SEQ ID:8)	CGGNNLLRAIEAQQHLLQLTVWGIKQLQARILAVERYLKDQ
DP116 (SEQ ID:9)	LQARILAVERYLKDQQQ

FIG.1

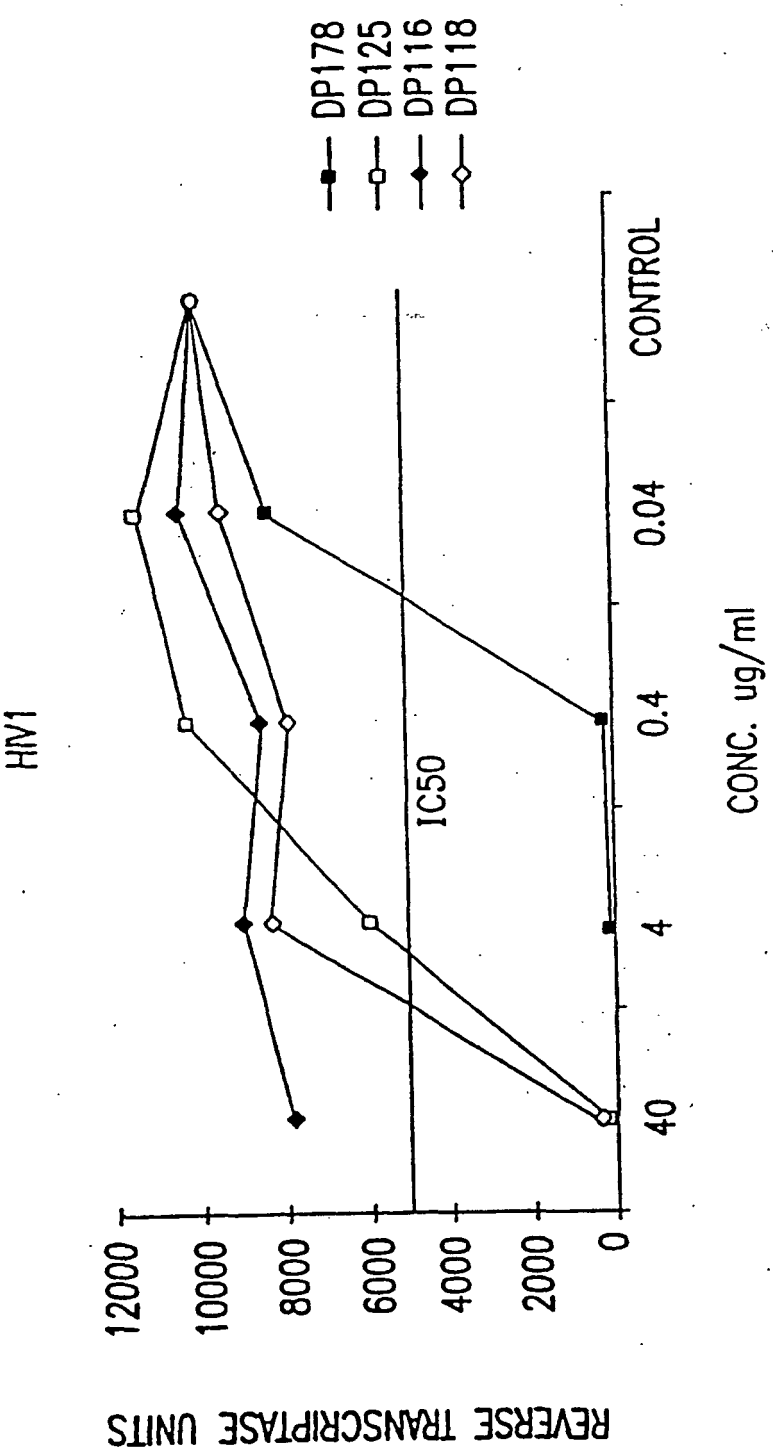

DP178
DP125
DP116
DP118
HIV1
IC50
CONTROL
0.04
0.4
4
40
CONC. ug/ml
12000
10000
8000
6000
4000
2000
0
REVERSE TRANSCRIPTASE UNITS

FIG.2

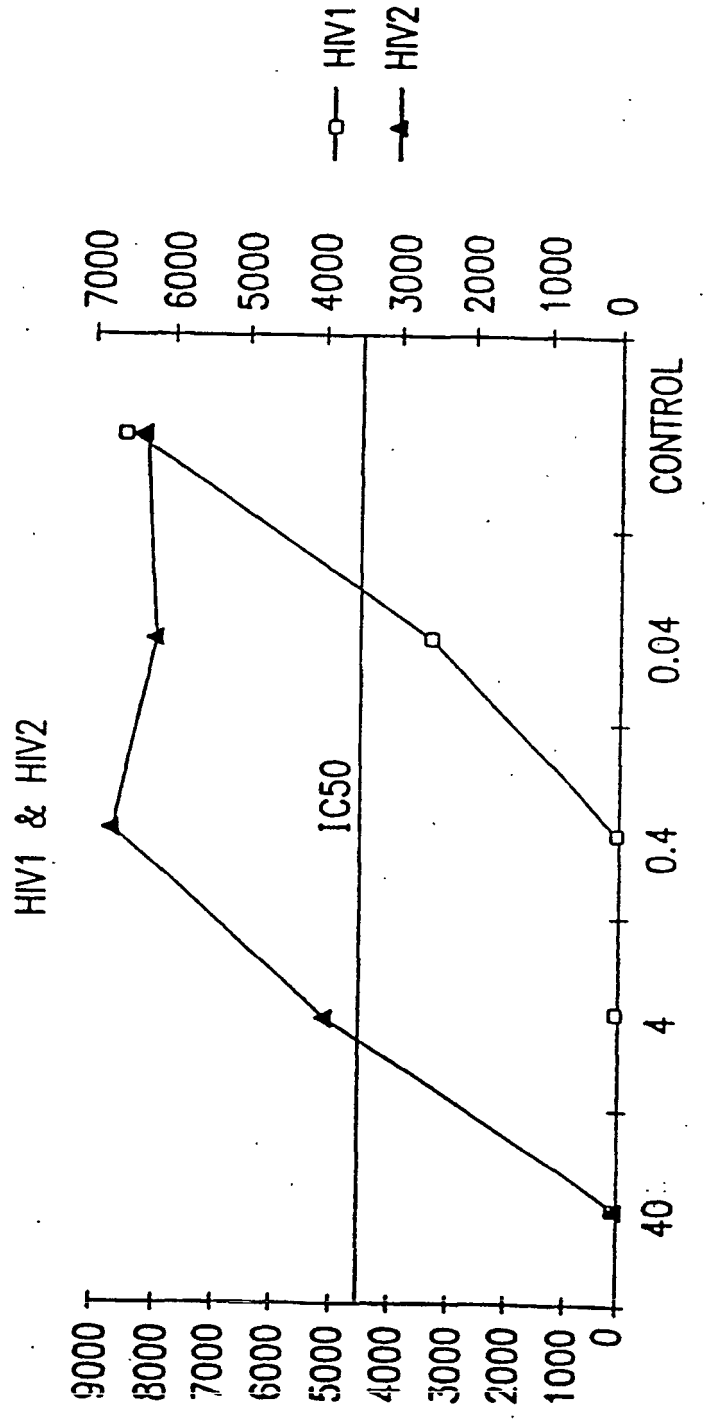

HIV1
HIV2
HIV1 & HIV2
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
7000
6000
5000
4000
3000
2000
1000
0
IC50
40
4
0.4
0.04
CONTROL
PD178 CONC. ug/ml

FIG.3

Number of Syncytia/well: concentration in µg/ml (micrograms/ml)

DP178	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	0	67
HIV1MN	0	0	0	0	0	ND	ND	ND	34
HIV1RF	0	0	0	0	0	ND	ND	ND	65
HIV1SF2	0	0	0	0	0	ND	ND	ND	58

DP125	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	54	69	80	75	79	82	67
HIV1MN	0	0	30	36	ND	ND	ND	ND	34
HIV1RF	0	0	67	63	ND	ND	ND	ND	65
HIV1SF2	0	0	9	66	ND	ND	ND	ND	58

DP116	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	75	ND	ND	ND	ND	ND	ND	ND	67
HIV1MN	35	ND	ND	ND	ND	ND	ND	ND	34
HIV1RF	81	ND	ND	ND	ND	ND	ND	ND	65
HIV1SF2	81	ND	ND	ND	ND	ND	ND	ND	58

FIG.4A

DP180	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	50	>45	>45	>45	>45	>45	>45	>45	58

DP185	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	ND	60

FIG.4B

HIV1

	Number of Syncytia/well: concentration in ng/ml (nanograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	0	0	0	0	0	14	20	48
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	ND	48	ND	ND	ND	ND	ND	ND

HIV2

	Number of Syncytia/well: concentration in µg/ml (micrograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	50	54	55	57	63	77	78	76
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	ND	58	ND	ND	ND	ND	ND	ND

FIG.5

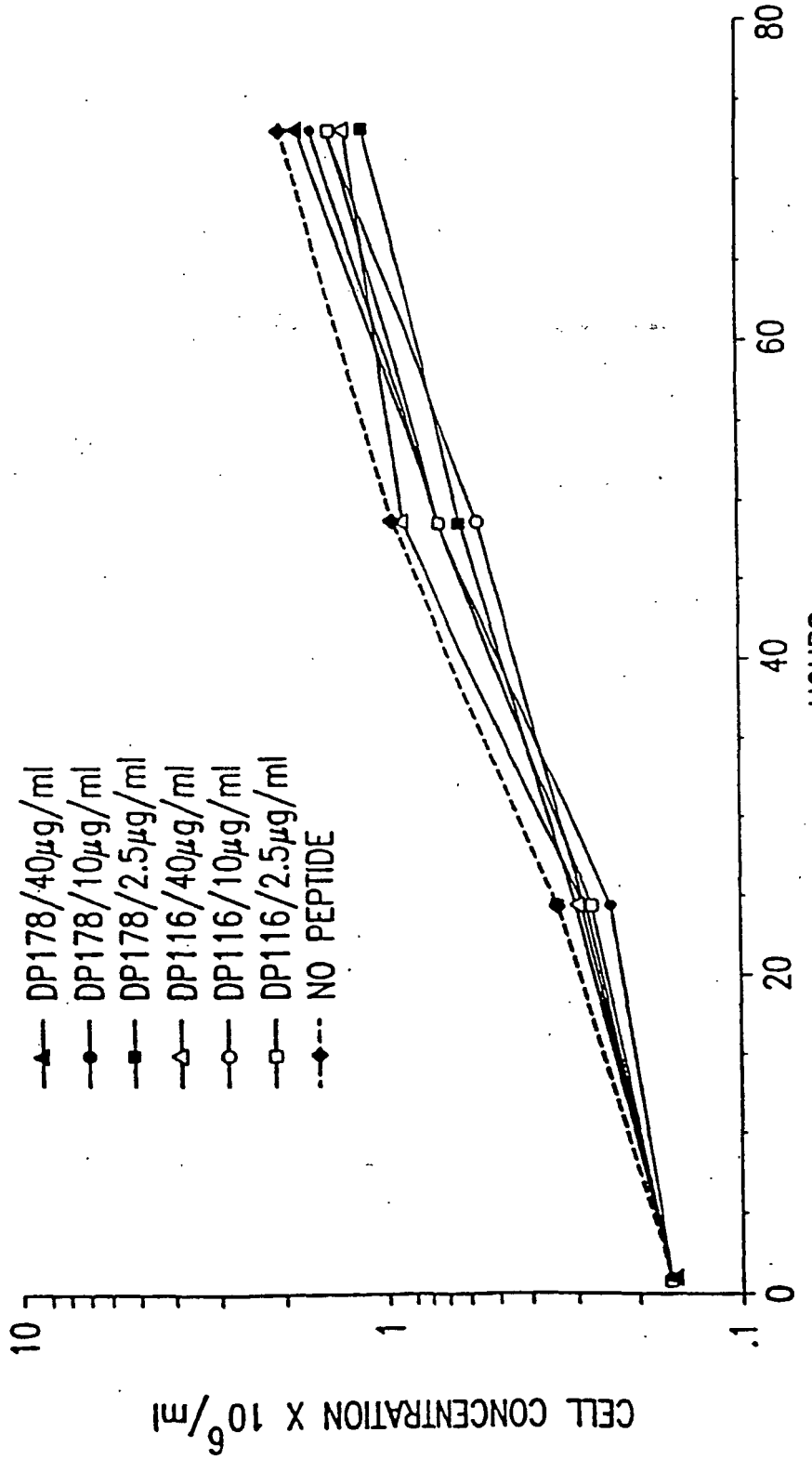

DP178/40µg/ml
DP178/10µg/ml
DP178/2.5µg/ml
DP116/40µg/ml
DP116/10µg/ml
DP116/2.5µg/ml
NO PEPTIDE
10
1
.1
0
20
40
60
80
HOURS
CELL CONCENTRATION X 10^6/ml

FIG.6

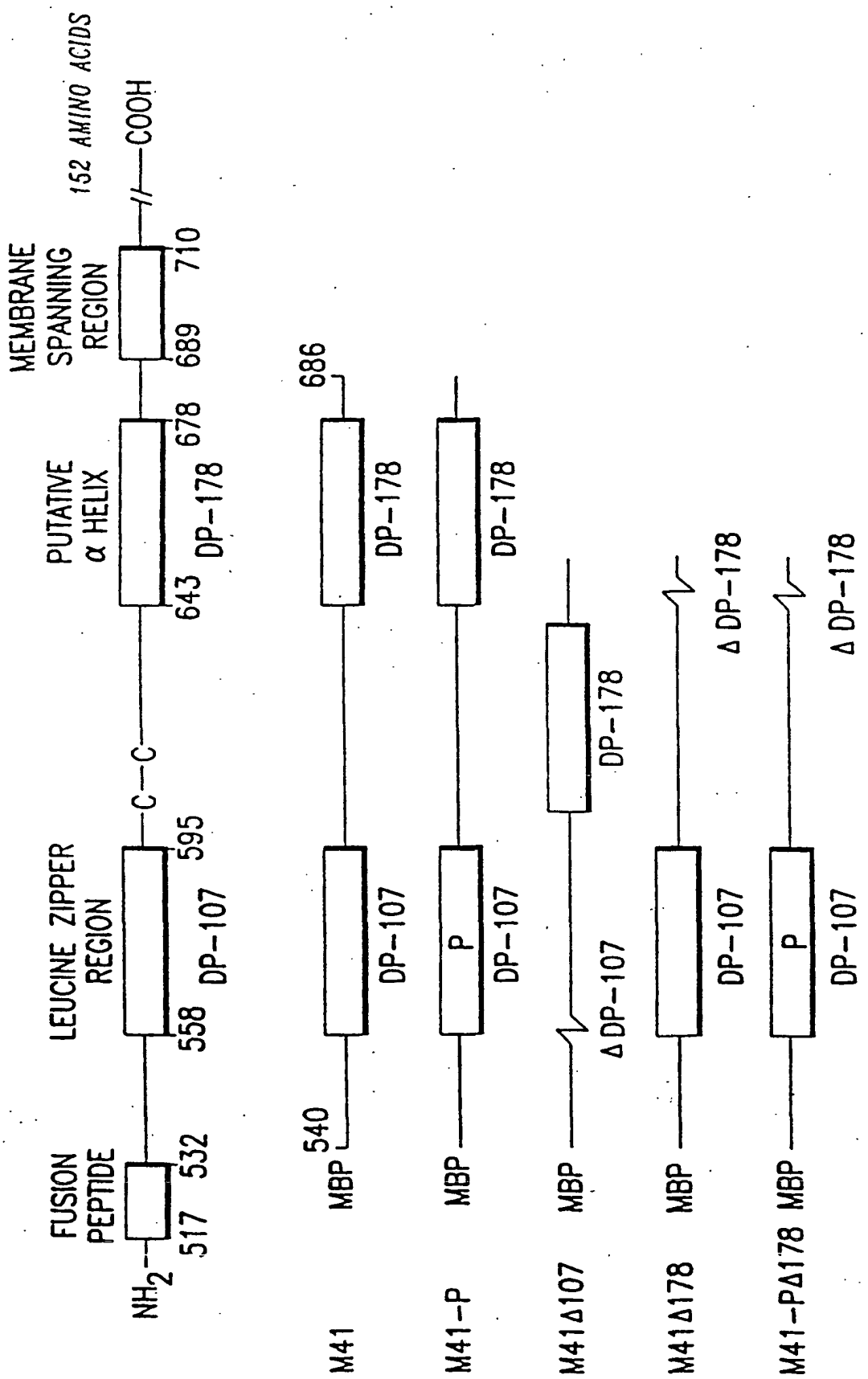

FUSION PEPTIDE
LEUCINE ZIPPER REGION
PUTATIVE α HELIX
MEMBRANE SPANNING REGION
152 AMINO ACIDS
NH2
517
532
558
595
643
678
689
710
COOH
C—C
DP-107
DP-178
MBP
540
686
M41
M41-P
M41Δ107
M41Δ178
M41-PΔ178
P
Δ DP-107
Δ DP-178

FIG. 7

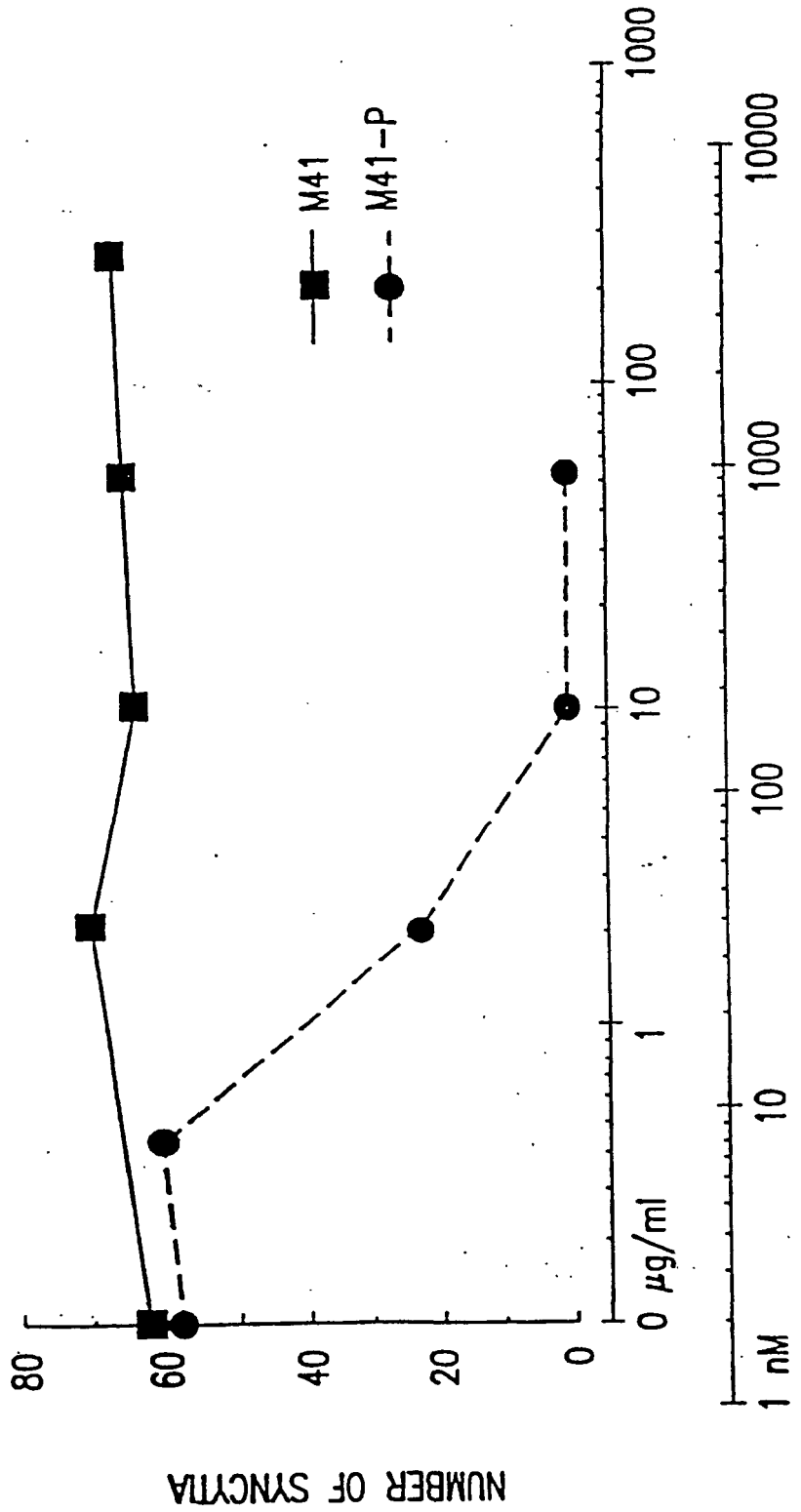

M41
M41-P
NUMBER OF SYNCYTIA
80
60
40
20
0
0 μg/ml
1 nM
1
10
100
1000
10
100
1000
10000

FIG.8

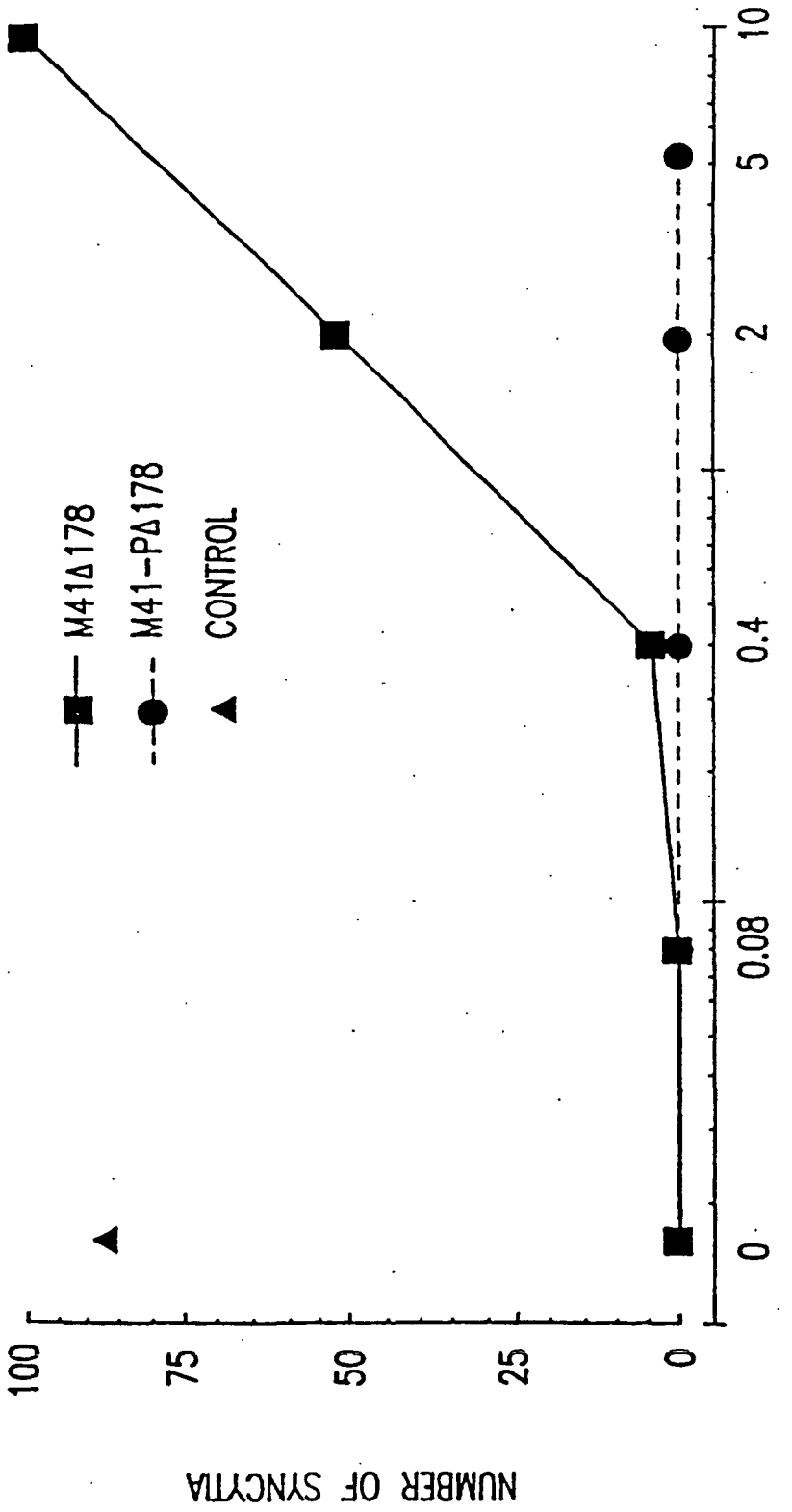

M41Δ178
M41-PΔ178
CONTROL
NUMBER OF SYNCYTIA
100
75
50
25
0
0
0.08
0.4
2
5
10
μg/ml

FIG.9

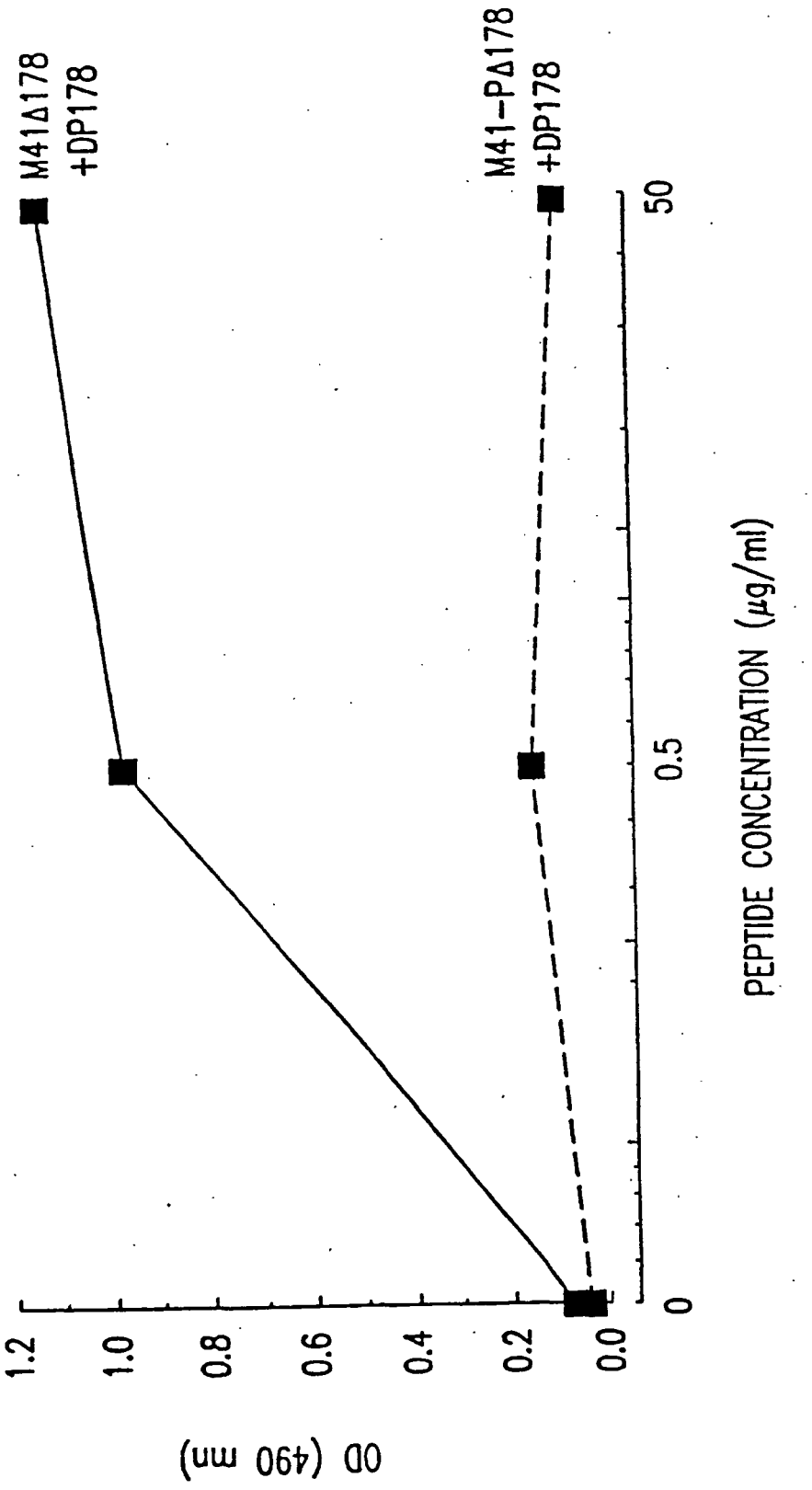

M41Δ178
+DP178
M41-PΔ178
+DP178
OD (490 mn)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
0.5
50
PEPTIDE CONCENTRATION (μg/ml)

FIG.10

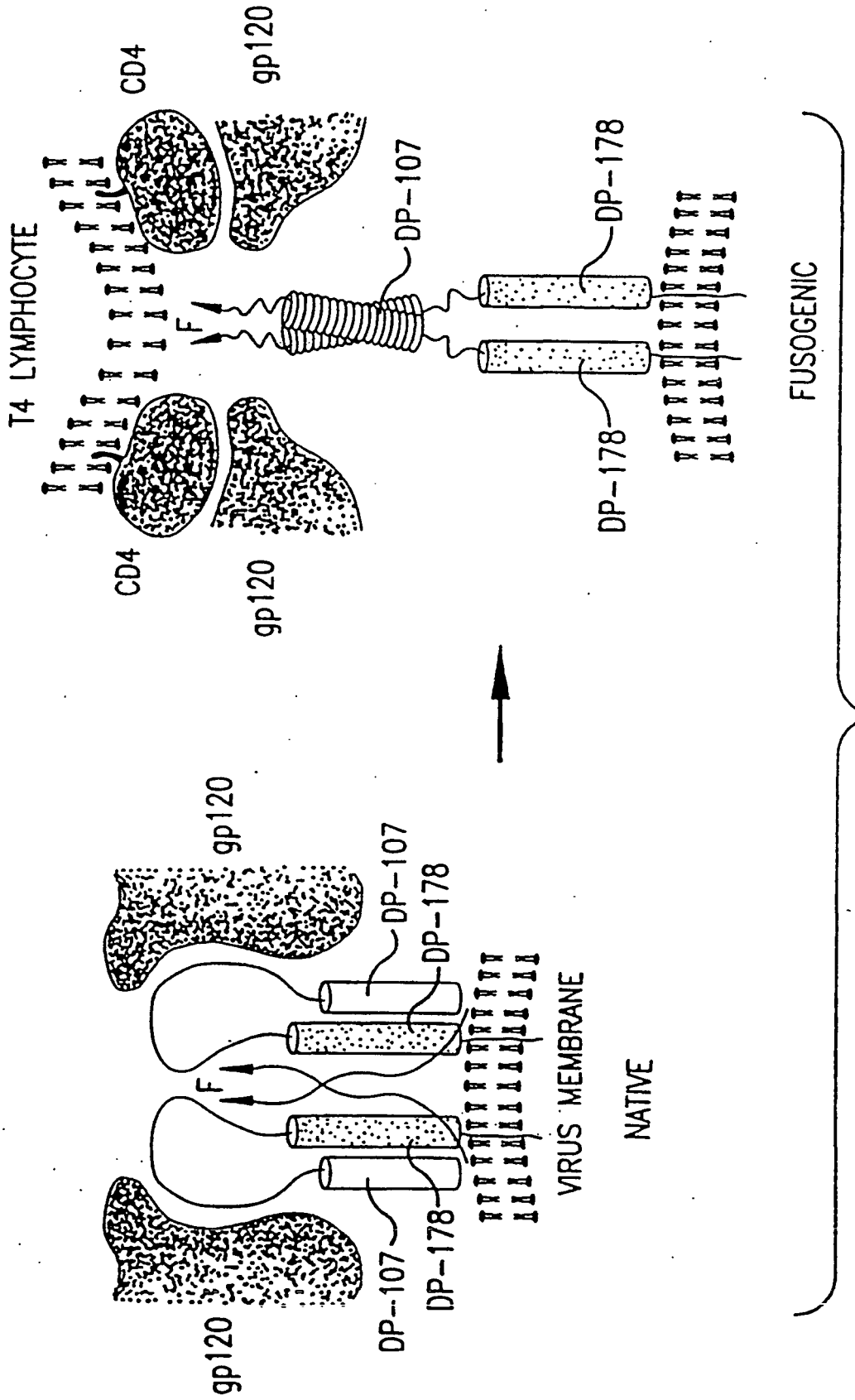

T4 LYMPHOCYTE
CD4
gp120
CD4
gp120
F
DP-107
DP-178
DP-178
FUSOGENIC
gp120
DP-107
DP-178
F
VIRUS MEMBRANE
NATIVE
DP-107
DP-178
gp120

FIG.11A

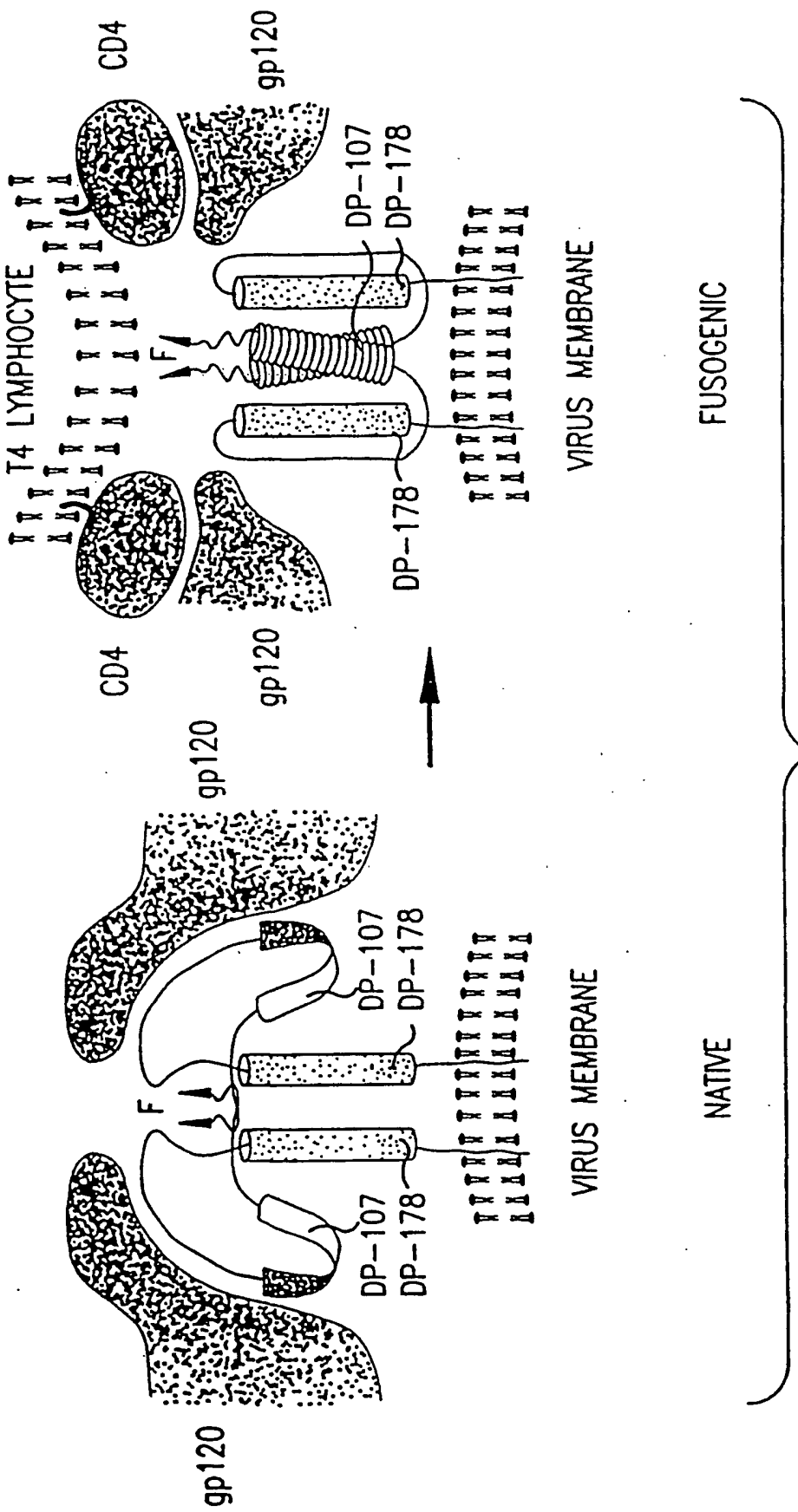

T4 LYMPHOCYTE
CD4
gp120
DP-107
DP-178
F
VIRUS MEMBRANE
FUSOGENIC
NATIVE

FIG.11B

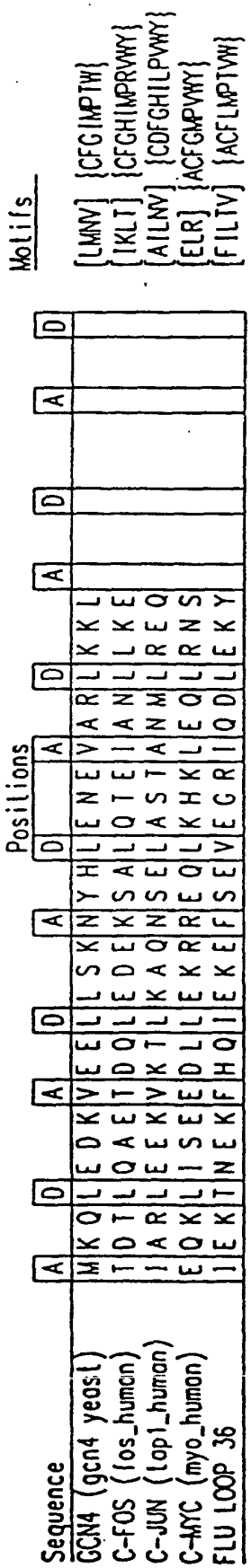

Positions
Motifs
Sequence
GCN4 (gcn4_yeast)
C-FOS (fos_human)
C-JUN (jun1_human)
C-MYC (myc_human)
FLU LOOP 36
[LMNV] {CFGIMPTW}
{IKLT} {CFGHIMPRVWY}
{AILNV} {CDFGHILPVWY}
{ELR} {ACFGMPVWY}
{FILTV} {ACFLMPTVW}

FIG.12

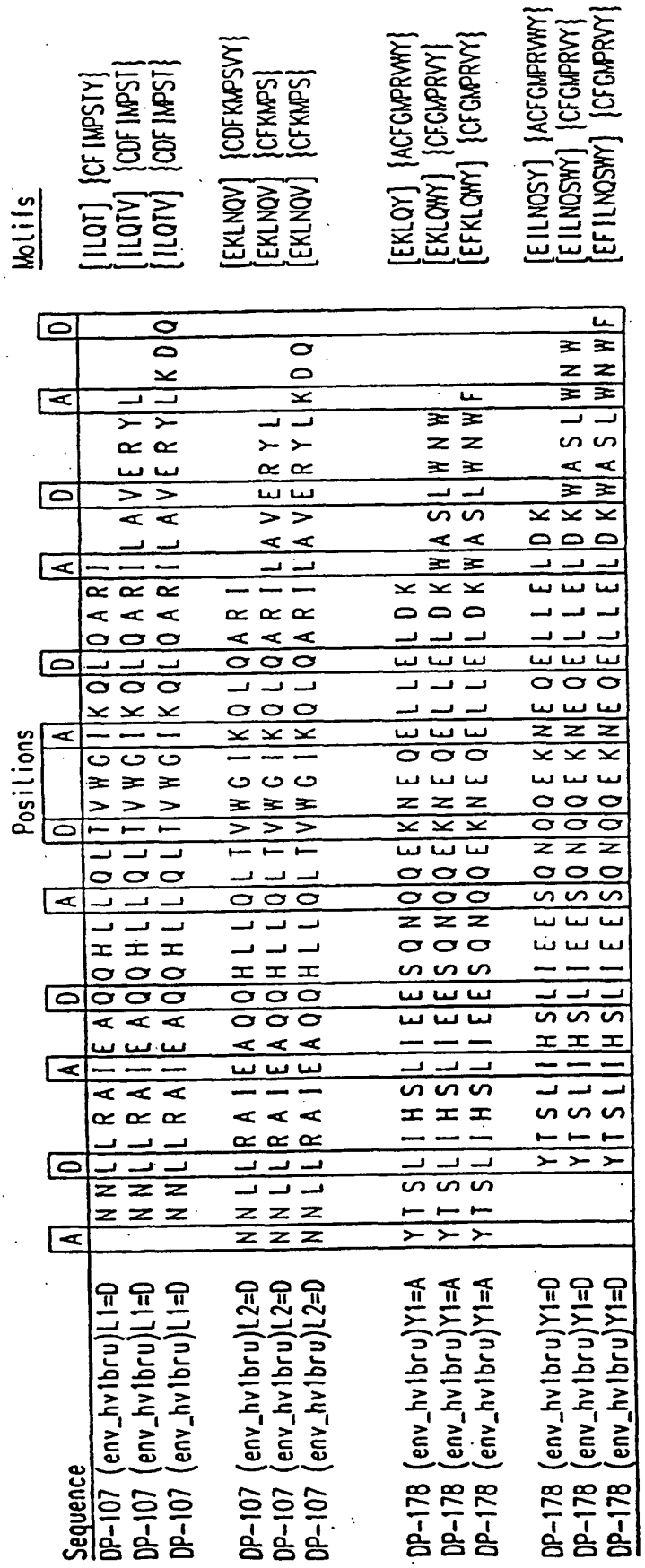

Sequence
Positions
Motifs
DP-107 (env_hv1bru)L1=D
DP-107 (env_hv1bru)L1=D
DP-107 (env_hv1bru)L1=D
DP-107 (env_hv1bru)L2=D
DP-107 (env_hv1bru)L2=D
DP-107 (env_hv1bru)L2=D
DP-178 (env_hv1bru)Y1=A
DP-178 (env_hv1bru)Y1=A
DP-178 (env_hv1bru)Y1=A
DP-178 (env_hv1bru)Y1=D
DP-178 (env_hv1bru)Y1=D
DP-178 (env_hv1bru)Y1=D
[ILQT] {CFIMPSTY}
[ILQTV] {CDFIMPST}
[ILQTV] {CDFIMPST}
[EKLNQV] {CDFKMPSVY}
[EKLNQV] {CFKMPS}
[EKLNQV] {CFKMPS}
[EKLQY] {ACFGMPRVWY}
[EKLQWY] {CFGMPRVY}
[EFKLQWY] {CFGMPRVY}
[EILNQSY] {ACFGMPRVWY}
[EILNQSWY] {CFGMPRVY}
[EFILNQSWY] {CFGMPRVY}

FIG.13

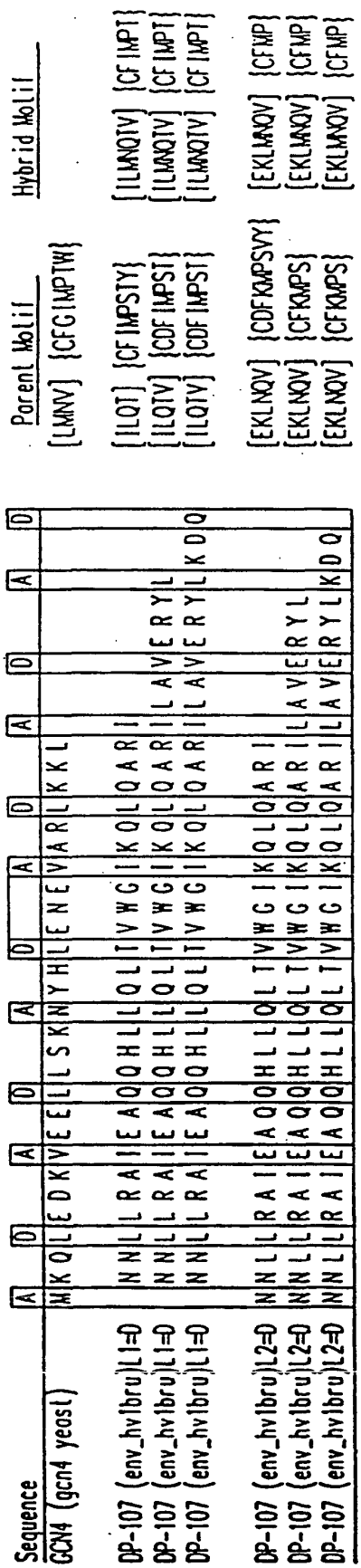

Positions
Sequence
GCN4 (gcn4 yeast)
DP-107 (env_hv1bru)L1=0
DP-107 (env_hv1bru)L1=0
DP-107 (env_hv1bru)L1=0
DP-107 (env_hv1bru)L2=0
DP-107 (env_hv1bru)L2=0
DP-107 (env_hv1bru)L2=0
Parent Motif
Hybrid Motif
[LMNV] {CFGIMPTW}
[ILQT] {CFIMPSTY} [ILMNQTV] {CFIMPT}
[ILQTV] {CDFIMPST} [ILMNQTV] {CFIMPT}
[ILQTV] {CDFIMPST} [ILMNQTV] {CFIMPT}
[EKLNQV] {CDFKMPSVY} [EKLMNQV] {CFMP}
[EKLNQV] {CFKMPS} [EKLMNQV] {CFMP}
[EKLNQV] {CFKMPS} [EKLMNQV] {CFMP}

FIG.14

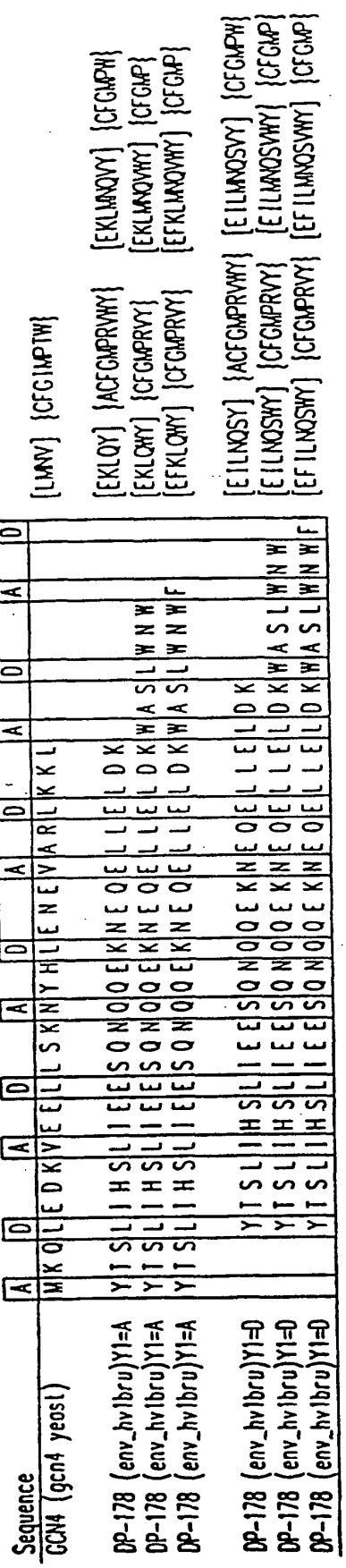
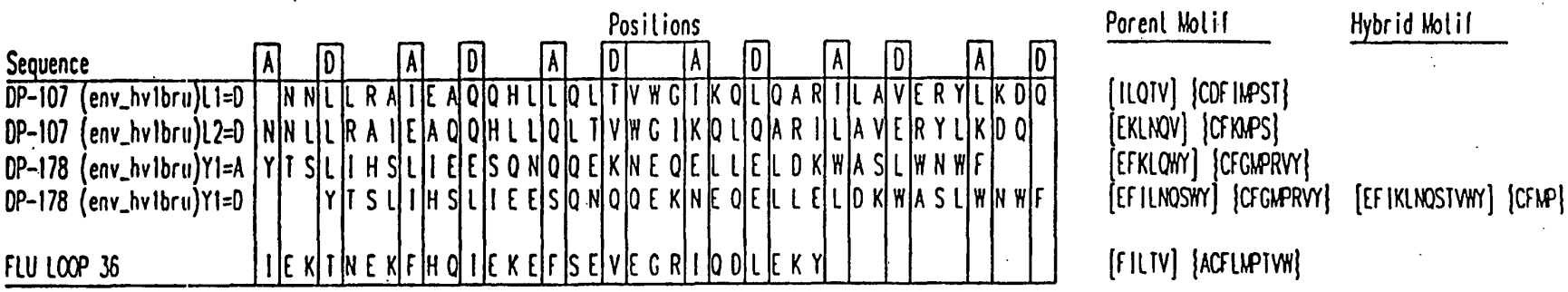

Positions
Parent Motif
Hybrid Motif
Sequence
GCN4 (gcn4 yeast)
DP-178 (env_hv1bru)Y1=A
DP-178 (env_hv1bru)Y1=A
DP-178 (env_hv1bru)Y1=A
DP-178 (env_hv1bru)Y1=D
DP-178 (env_hv1bru)Y1=D
DP-178 (env_hv1bru)Y1=D
[LMNV] {CFGIMPTW}
[EKLQY] {ACFGMPRVWY}
[EKLQWY] {CFGMPRVY}
[EFKLQWY] {CFGMPRVY}
[EILNQSY] {ACFGMPRVWY}
[EILNQSWY] {CFGMPRVY}
[EFILNQSWY] {CFGMPRVY}
[EKLMNQYY] {CFGMPW}
[EKLMNQWY] {CFGMP}
[EFKLMNQWY] {CFGMP}
[EILMNQSVY] {CFGMPW}
[EILMNQSWY] {CFGMP}
[EFILMNQSWY] {CFGMP}

FIG. 15



Sequence	Positions																																		Parent Motif	Hybrid Motif
	A		D			A		D		A		D			A		D			A		D			A		D								
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}	
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] {CFKMPS}	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F			[EFKLQWY] {CFGMPRVY}	
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}	[EFIKLNQSTVWY] {CFMP}
FLU LOOP 36	I	E	K	T	N	E	K	F	H	Q	I	E	K	E	F	S	E	V	E	G	R	I	Q	D	L	E	K	Y											[FILTV] {ACFLMPTVW}	

FIG.16

Sequence	Positions																															Parent Motif	Hybrid Motif
	A		D			A		D			A		D			A		D			A		D			A		D				
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] [CFGIMPTW]	
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] [CDFIMPST]	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	M	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F				[EFKLQWY] [CFGMPRVY]	[EFIKLMNQTVWY] [CFMP]
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] [CFGIMPTW]	
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] [CDFIMPST]	
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] [CFGMPRVY]	[EFILMNQRSTVWY] [CFMP]
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] [CFGIMPTW]	
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] [CFKMPS]	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F				[EFKLQWY] [CFGMPRVY]	[EFKLMNQVWY] [CFMP]
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] [CFGIMPTW]	
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] [CFKMPS]	
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] [CFGMPRVY]	[EFIKLMNQSVWY] [CFMP]

FIG.17

| | Positions | | |

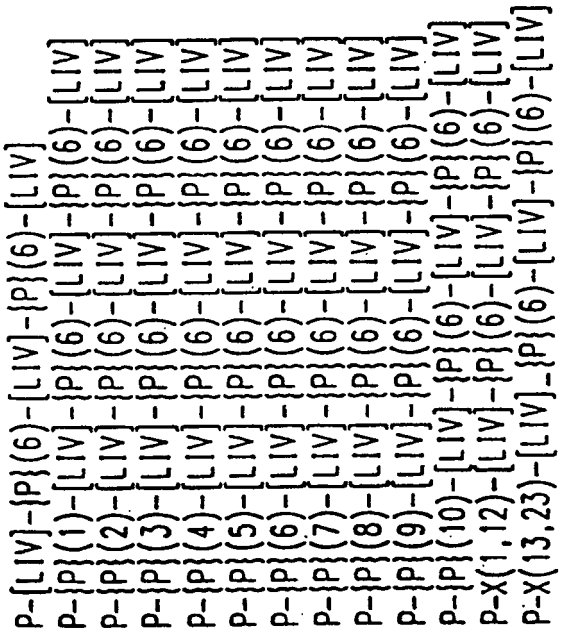

P-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(1)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(2)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(3)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(4)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(5)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(6)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(7)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(8)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(9)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(10)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-X(1,12)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-X(13,23)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]

FIG.19

Fusion ▼ALLMOTI5▼
Peptide ♣107x178x4♣
▼.....FLGFLG A AGSTMGARSM TLTVQARQ ♣LL SGIVQQQ *DP107-NNL*

LRAIEAQQHL LQLTVWGIKQ LQARILAVER YLKDQ-DP107 QLLG♣▼ I WGC

♣107x178x4♣
▼ALLMOTI5▼ *LVS Coiled-Coil*
SGKLICT TAVP ▼WNASWS NKSLEQIWNN MTWM *E ♣WDRELNN *DP178-*

YTSLIHSL IEESQNQQEK NEQELLELDK WASLWNWF-DP178* NI

♦Transmembrane Region♦
TNWLWYIK♣ ♦IF IMIVGGLVGL RIVFAVLSIV NRVRQGYS▼ PL

♣P23LZIPC♣
SFQTHLPTPR GPDR ♣PEGIEE EGGERDRDRS IRLVNGSLAL IWDDLRSL♣ CL

▼ALLMOTI5▼ ♣107x178x4♣
F ▼SYHRLRDLL LIVTRIVELL GRRGW ♣EALKY WWNLLQYWSQ

ELKNSAVSLL NAT♣ AIAVAEG TDRVIEVVQG A▼ CRAIRHIPR

RIRQGLERIL L

FIG. 20

Fusion Peptide ▼ALLMOTI5▼ ♦107x178x4♦

▼.....FLGFL LGVGSAIAS GVA ♦VSKVLHLEGEVNKIKSA

♣P1&12LZIPC♣

LLSTNKAVVS LSNGVSVLTS KVLDLKNYID KQ♦▼ LL ♣PIVNKQ

♦107x178x4♦

SC ♦SISNIETVI♣ EFQQKNNRLLEITREFSVNAG♦ VTTPVSTMLTNSELLSL

♣P1&12LZIPC♣

▼ALLMOTI5▼

INDM ♣PI ▼TNDQ KKLMSNNVQI V♣ RQQSYSI♣ MS IIKEEVLAYV

VQ▼ LPLYGVID TPCWKLHTSP LCTTNTKEGS NICLTRTDRG WYCDNAGSVS

FFPQAETCKV QSNRVFCDTM NSLTLPSEIN LCNVDIFNPK

YDCKIMTSKT DVSSSVITSL GAIVSCYGKT KCTASNKNRG

IIKTFSNGCDYVSNKGMDTV SVGNTLYYVN KQEGKSLYVK G

♣P7, 12, & 23LZIPC♣

♦107x178x4♦ ▼ALLMOTI5▼

EPIINFYDPLVF ♣PSDE ♦FDASISQVNEKINQSLAF ▼I♣ RKSDELL♣

♦Transmembrane Region♦

HNVNA♦ GK STTN ♦IMITTIIVIIVILLS LIAVGLLLY▼ C♦

KARSTPVTLS KDQLSGINNI AFSN

FIG. 21

Fusion
Peptide ▼ALLMOTI5▼ ▲107x178x4▲
.....FLGFLG ▼AAGTA MGAAA ▲TALTVQSQHLLAGILQQQKNLLAAV

▲107x178x4▲
EAQ▲ QQM ▲LKLTIWGVKNLNARVTALEKYLEDQARLN▲ AWG▼ CA

LVS Coiled-Coil
▼ALLMOTI5▼ ▲107x178x4▲
WKQVCHTTVP WQWNNRTPDW ▼NNMT *WLE ▲WERQISYLEGNIT

▲107x178x4▲
TQLEEARAQEEKNLD▲ AYQKLSS* WSDFWSW▼ FDF ▲SKWLN ♦ILK

♦Transmembrane Region♦
IGFLDVLGIIGLRLLYTV♦ YS▲ CIARVRQGYS PLSPQIHIHP WKGQPDNAEG

PGEGGDKRKN SSEPWQKESG TAEWKSNWCK RLTNWCSISS IWLYNS

▼ALLMOTI5▼
▼CLTL LVIHLRSAFQY IQYGLGELKA AAQEAVVALA RLAQNAGYQIWL▼

ACRSAYRA IINSPRRVRQ GLEGILN

FIG. 22

Fusion ♣107x178x4♣
Peptide ♥ALLMOTI5♥ *LVS Coiled-Coil*
.....FAG ♥VVL AGVALGVATA AQITAGIALHQ ♣*SNLNAQAIQ

SLRTSLEQSNKAIEEIREATQETVIA* VQGVQDY♣ VNNEL♥ VP

♥ALLMOTI5♥
♣107x178x4♣
♣P6 & 12LZIPC♣
AMQHMSCELVGQRLGLRLLRYYTELLSIFGPSLRD ♣PISA ♣♥EISIQALIYAL

GGEIIHKILEKLGYSGSD♣ MIAILESRGIKTKI♥ THVDLPGKF IILSISY

♣P1 & 12LZIPC♣
♣PTLSEVKGVIVHRLEAV♣ SYNIGSQEWYTTVPRYIATNGYLISNFDESSCVFVS

ESAICSQNSL YPMSPLLQQC IRGDTSSCAR TLVSGTMGNK FILSKGNIVA

NCASILCKCY STSTIINQSP DKLLTFIASD TCPLVEIDGA TIQVGGRQYP

LVS Coiled-Coil
♥ALLMOTI5♥
♣P12 & 23LZIPC♣
DMVYEGKVAL G ♣PAISLD ♥RL*DVGTNLGNALKKLDDAKVLI♣

♦Transmembrane Region♦
DSS♣ NQILETVR RS♥* SFN ♦EGSLL SVPILSCTAL ALLLLIYCC♦

K RRYQQTLKQH TKVDPAFKPD LTGTSKSYVR SL

FIG. 23

Fusion ♥ALLMOTI5♥
Peptide
♠107x178x4♠
♥.....FIGAI IGSVALGVA TAAQITAASA LIQANQNAAN ♠ILRLKESITA

TIEAVIIEVTDGLSQLAVA♠ VG KM♥ QQFVNDQFNNTAQELDCIKITQQV

♥ALLMOTI5♥
GVELNLYLTELTTV FGPQITSPAL ♥TQLTIQALYNAGGNMDYLLTKLGVG

✣P1 & I2LZIPC✣
NNQLSSLIGSGLIT GN♥ ✣PILYDSQT QLLGIQVTLP SVGNLNNMRATYLET

LSVST TKGFASALVP KVVTQVGSVI EELDTSYCIE TDLDLYCTRI VTFPMSPGIY

SCLNGNTSAC MYSKTEGALT TPYMTLKGSV IANCKMTTCR CADPPGIISQ

♥ALLMOTI5♥
♠107x178x4♠
NYGEAVSLID RHSCN ♠♥VLSLD GITLRLSGEF DATYQKNISI LDSQVIVTG

LVS Coiled-Coil
♦Trans-
N LDISTELGNV NNSISNALDK LEESNSKLDK VNVKLTSTSA ♦LIT YIA

membrane Region♦
LTAISLVCGII SLV♥♠ LACYLMY♦ KQKAQQKTLLWLGNNTLGQMRATTKM

FIG. 24

Fusion ▼ALLMOTI5▼
Peptide ♠107x178x4♠ *LVS Coiled-Coil*
.....FFGGV ♠IG ▼TIALG *VATSAQITAAVALVEAKQARSDIEKLKE

AIRDTNKAVQSVQSSIGNLIVAIKSVQ* DYVNKE▼♠ IVPSIARLGCEAAG

▼ALLMOTI5▼
♠107x178x4♠
LQLGIALTQH ♠▼YSELTNIFGDNIGSLQEKGIKLQGIASLYRTNITE▼♠

♣P5 & 12LZIPC♣
IFTTSTVDKYDIYDLLFTESIKVRVIDVDLNDYSITLQVRL ♣PLLTRLLNTQIYR

VDSISYNI♣ QNREWYI♣ PLPSHIMTKGAFLGGADVKECIEAFSSYIC

PSDPGFVLNHEMESCLSGNISQCPRTVVKSDIVPRYAFVNGGVVANCITT

TCTCNGIGNRINQPPDQGVKIITHKECNTIGINGMLFNTNKEGTLAFYTP

▼ALLMOTI5▼
♠107x178x4♠
♣P6 & 23LZIPC♣
NDITLNNSVALD ♣PIDI ♠SIELN ▼KAKSDLEESKEWI♣ RRSNQKL♣

♦Transmembrane Region♦
DSIGNWHQSSTT ♦IIIV♠ LIMIIILFIINVTII♦ IIAVKYY▼ R

IQKRNRVDQN DKPYVLTNK

FIG. 25

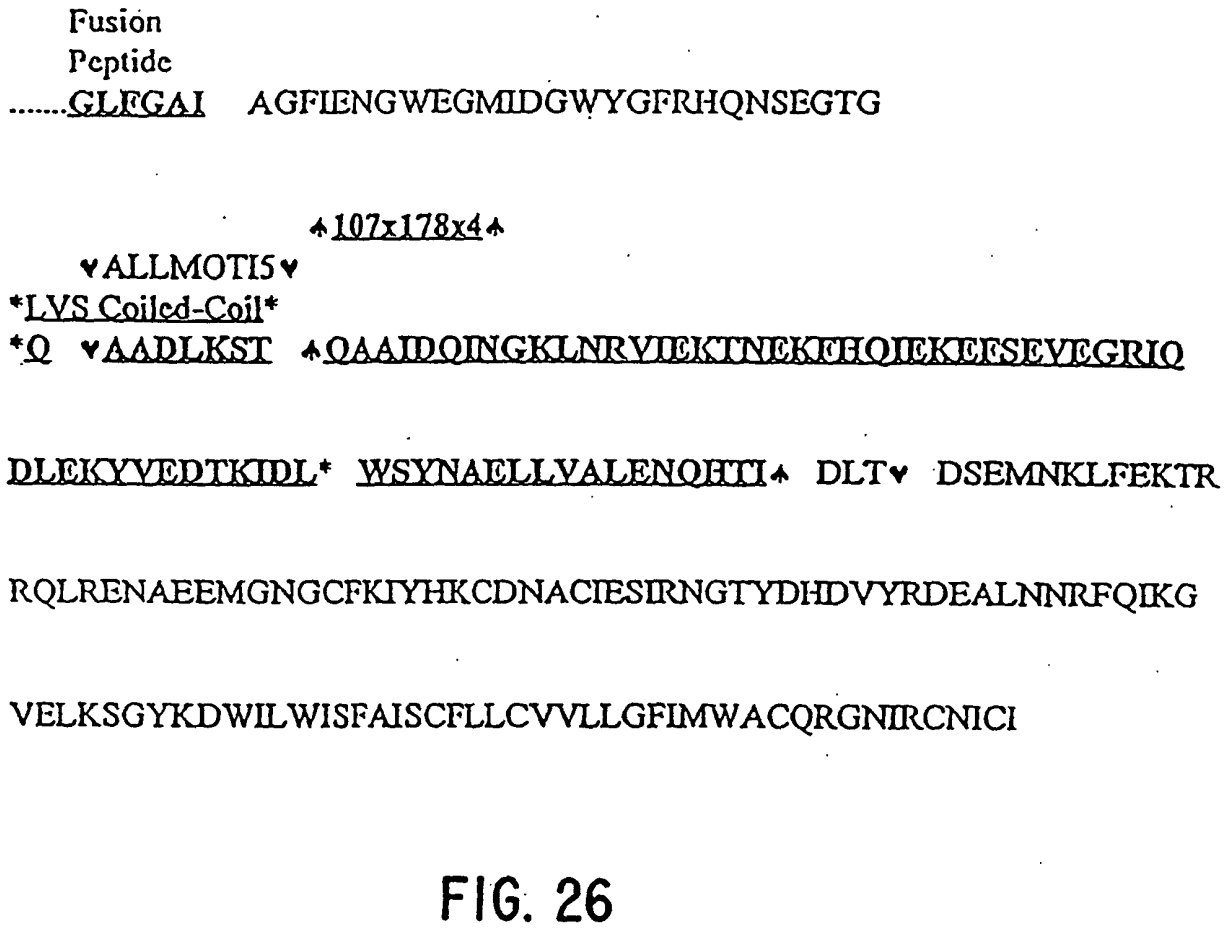

Fusion
Peptide
.....GLFGAI AGFIENGWEGMIDGWYGFRHQNSEGTG
♠107x178x4♠
♥ALLMOTI5♥
LVS Coiled-Coil
*Q ♥AADLKST ♠QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQ
DLEKYVEDTKIDL* WSYNAELLVALENQHTI♠ DLT♥ DSEMNKLFEKTR
RQLRENAEEMGNGCFKIYHKCDNACIESIRNGTYDHDVYRDEALNNRFQIKG
VELKSGYKDWILWISFAISCFLLCVVLLGFIMWACQRGNIRCNICI

FIG. 26

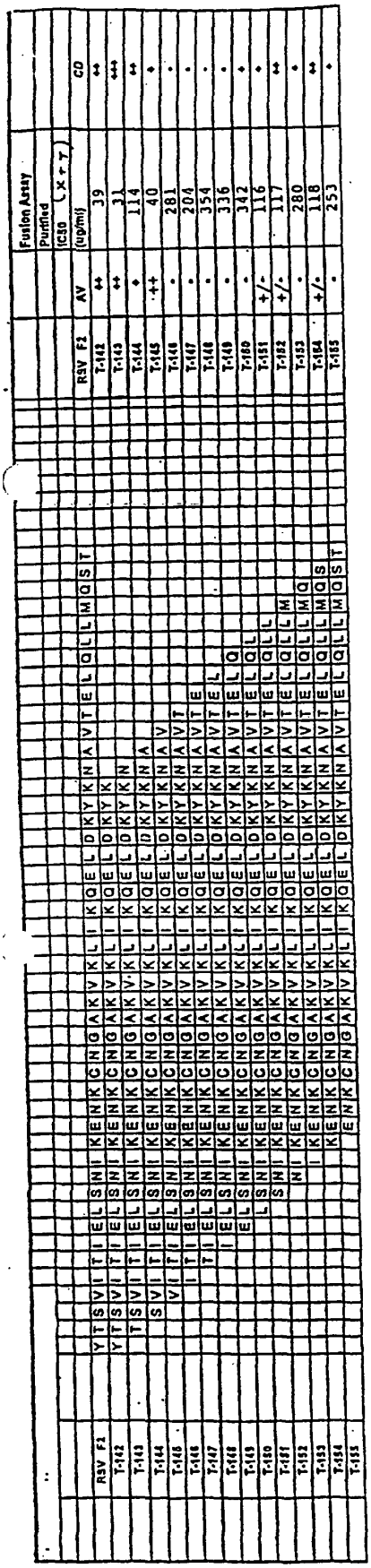


FIG. 27A

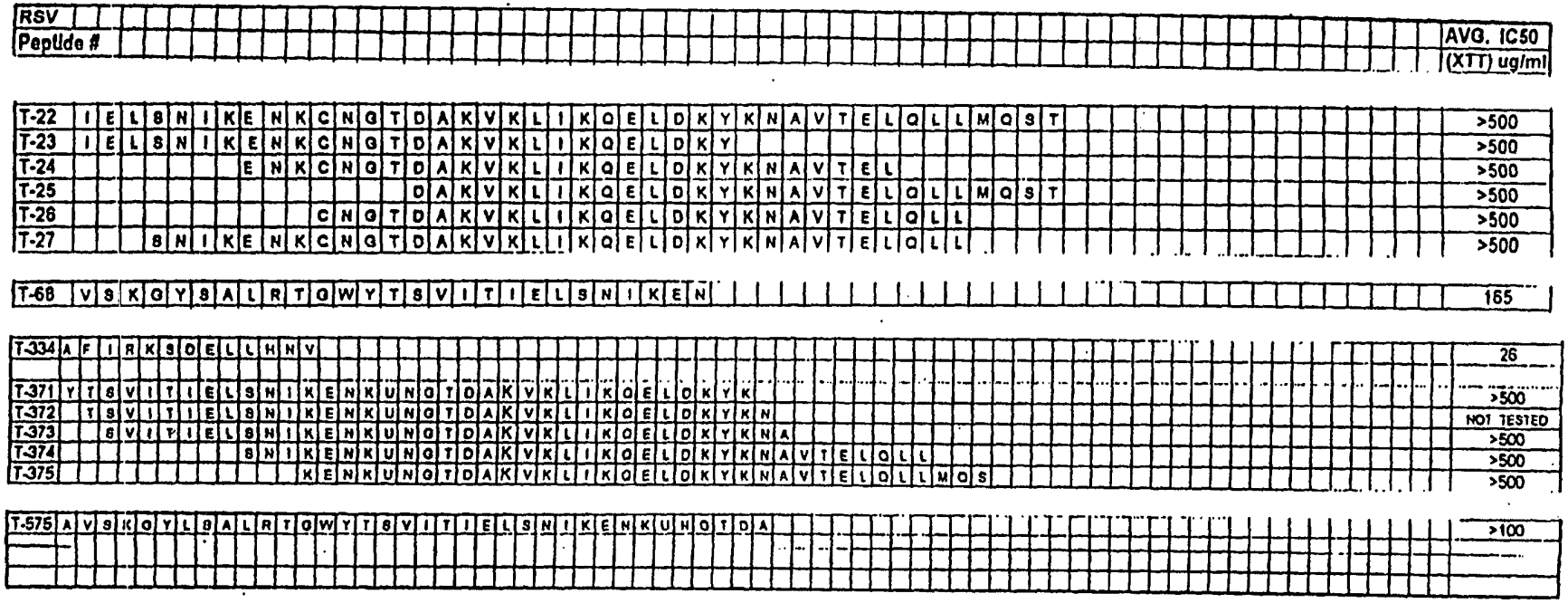

RSV
Peptide #
AVG. IC50
(XTT) ug/ml
T-22 IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST >500
T-23 IELSNIKENKCNGTDAKVKLIKQELDKY >500
T-24 ENKCNGTDAKVKLIKQELDKYKNAVTEL >500
T-25 DAKVKLIKQELDKYKNAVTELQLLMQST >500
T-26 CNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-27 SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-68 VSKQYSALRTQWYTSVITIELSNIKEN 165
T-334 AFIRKSDELLHNV 26
T-371 YTSVITIELSNIKENKUNQTDAKVKLIKQELDKYK >500
T-372 TSVITIELSNIKENKUNQTDAKVKLIKQELDKYKN NOT TESTED
T-373 SVITIELSNIKENKUNQTDAKVKLIKQELDKYKNA >500
T-374 SNIKENKUNQTDAKVKLIKQELDKYKNAVTELQLL >500
T-375 KENKUNQTDAKVKLIKQELDKYKNAVTELQLLMQS >500
T-575 AVSKQYLSALRTQWYTSVITIELSNIKENKUHQTDA >100

FIG. 27B

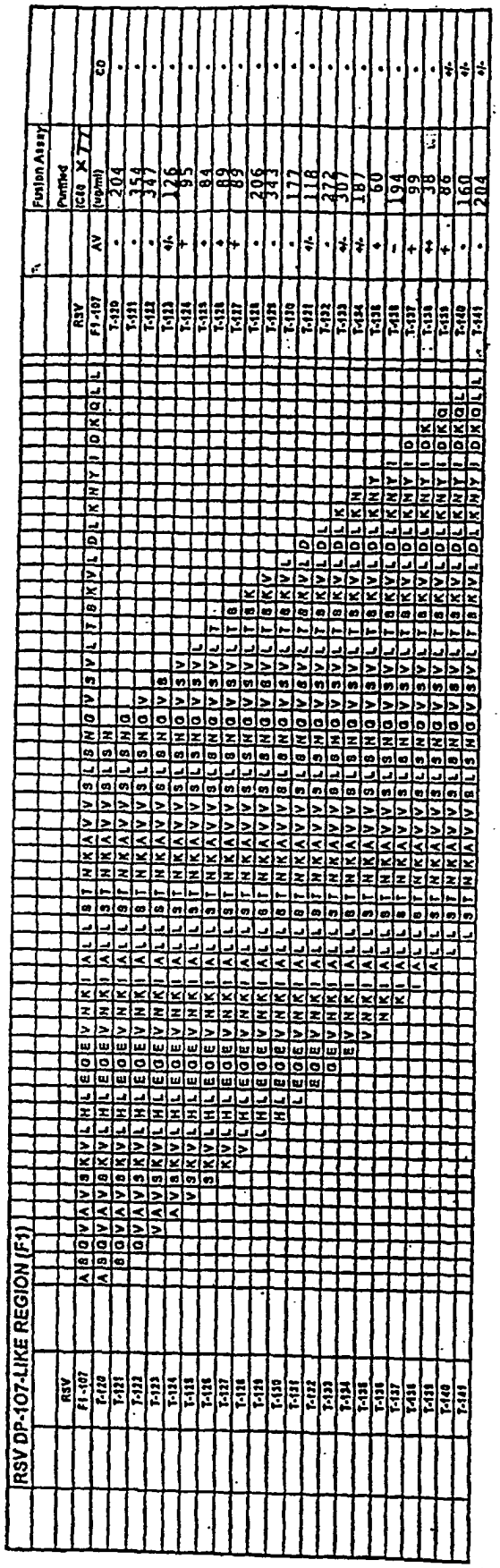

RSV DP-107-LIKE REGION (F1)
Fusion Assay
Purified
IC50 X 77
(ug/ml)
RSV
F1-107
T-120
T-121
T-122
T-123
T-124
T-125
T-126
T-127
T-128
T-129
T-130
T-131
T-132
T-133
T-134
T-135
T-136
T-137
T-138
T-139
T-140
T-141
AV
CD
204
354
126
95
84
89
89
206
343
172
118
372
307
187
60
194
99
38
86
160
204

FIG. 27C

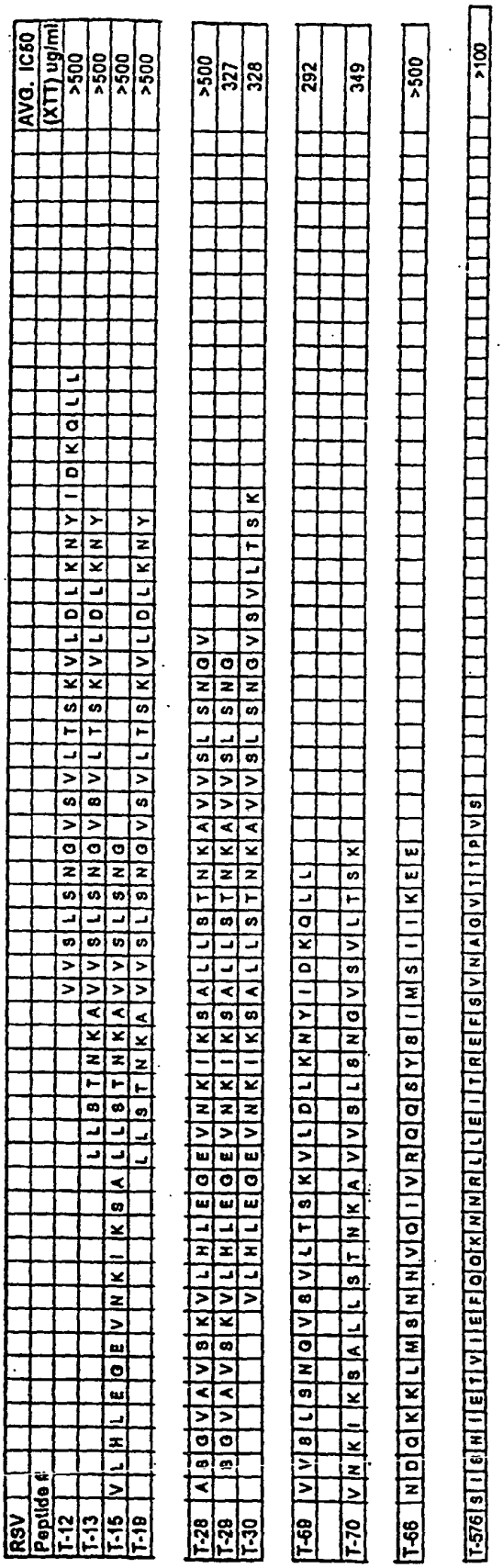

RSV
Peptide #
AVG. IC50
(XTT) ug/ml
T-12
T-13
T-15
T-19
T-28
T-29
T-30
T-69
T-70
T-66
T-576
>500
>500
>500
>500
>500
327
328
292
349
>500
>100

FIG. 27D

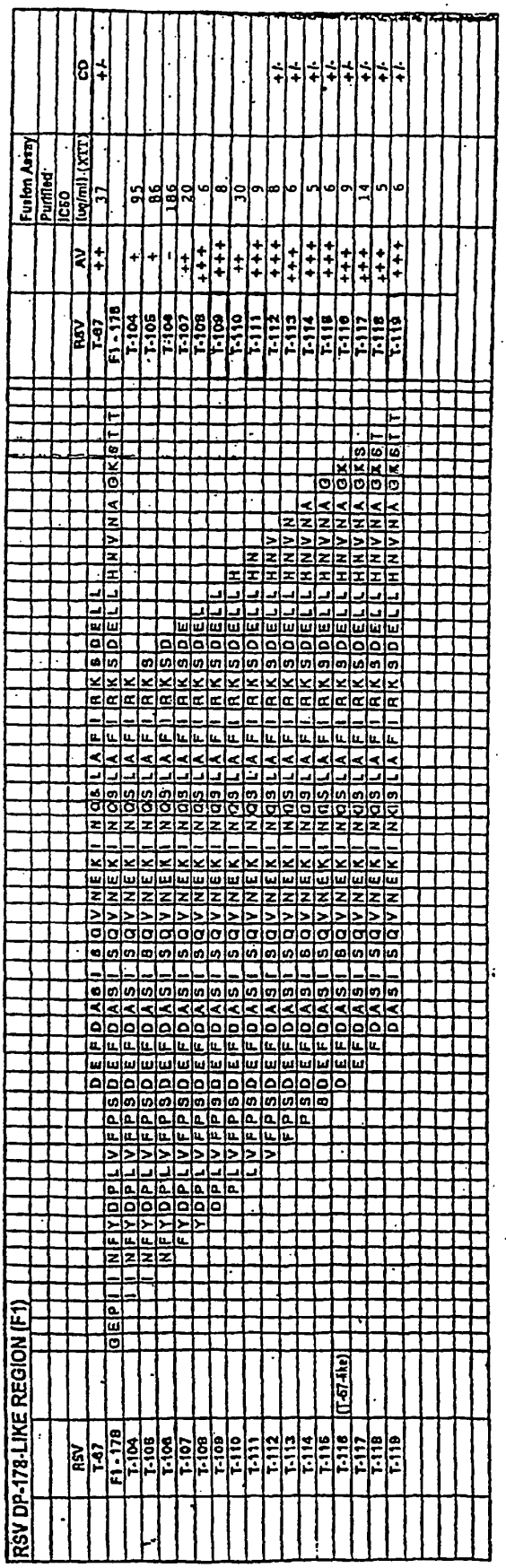

RSV DP-178-LIKE REGION (F1)
Fusion Assay
Purified
IC50
RSV
AV
(ug/ml) (XTT)
CD
T-47
++
37
+/-
F1 - 178
T-104
+
95
T-105
+
86
T-106
-
186
T-107
++
20
T-108
+++
6
T-109
+++
8
T-110
++
30
T-111
+++
9
T-112
+++
8
+/-
T-113
+++
6
+/-
T-114
+++
5
+/-
T-115
+++
6
+/-
T-116
+++
9
+/-
T-117
+++
14
+/-
T-118
+++
5
+/-
T-119
+++
6
+/-

FIG. 28A

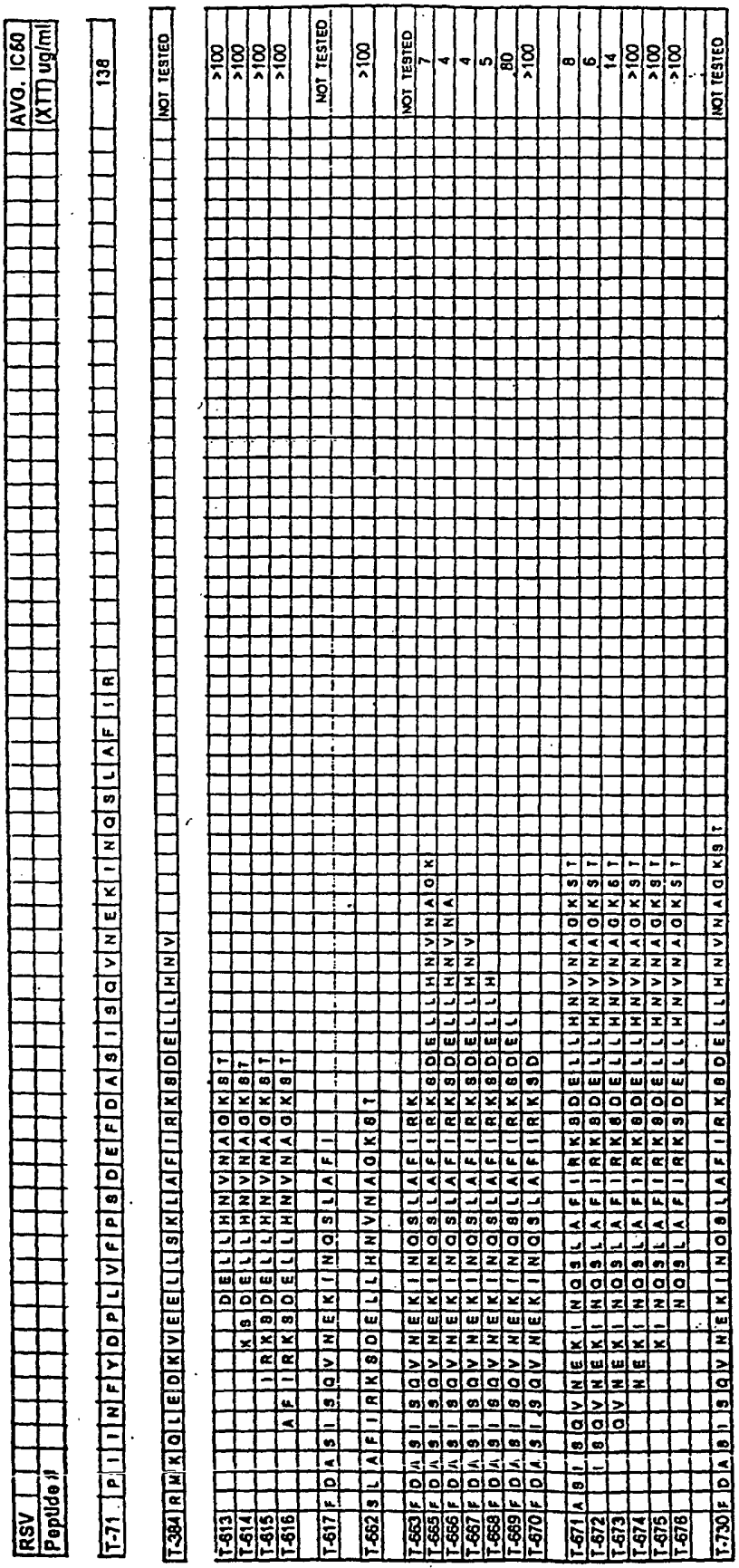

RSV
Peptide #
AVG. IC60
(XTT) ug/ml
T-71 P I I N F Y D P L V F P S D E F D A S I S Q V N E K I N Q S L A F I R
138
T-384 R M K Q L E D K V E E L L S K L A F I R K S D E L L H N V
NOT TESTED
T-613 D E L L H N V N A Q K S T >100
T-614 K S D E L L H N V N A Q K S T >100
T-615 I R K S D E L L H N V N A Q K S T >100
T-616 A F I R K S D E L L H N V N A Q K S T >100
T-617 F D A S I S Q V N E K I N Q S L A F I - - - - - NOT TESTED
T-562 S L A F I R K S D E L L H N V N A Q K S T >100
T-563 F D A S I S Q V N E K I N Q S L A F I R K NOT TESTED
T-565 F D A S I S Q V N E K I N Q S L A F I R K S D E L L H N V N A Q K 7
T-566 F D A S I S Q V N E K I N Q S L A F I R K S D E L L H N V N A 4
T-567 F D A S I S Q V N E K I N Q S L A F I R K S D E L L H N V 4
T-568 F D A S I S Q V N E K I N Q S L A F I R K S D E L L H 5
T-569 F D A S I S Q V N E K I N Q S L A F I R K S D E L L 80
T-570 F D A S I S Q V N E K I N Q S L A F I R K S D >100
T-671 A S I S Q V N E K I N Q S L A F I R K S D E L L H N V N A Q K S T 8
T-672 I S Q V N E K I N Q S L A F I R K S D E L L H N V N A Q K S T 6
T-673 Q V N E K I N Q S L A F I R K S D E L L H N V N A Q K S T 14
T-674 H E K I N Q S L A F I R K S D E L L H N V N A Q K S T >100
T-675 K I N Q S L A F I R K S D E L L H N V N A Q K S T >100
T-676 N Q S L A F I R K S D E L L H N V N A Q K S T >100
T-730 F D A S I S Q V N E K I N Q S L A F I R K S D E L L H N V N A Q K S T NOT TESTED

FIG. 28 B

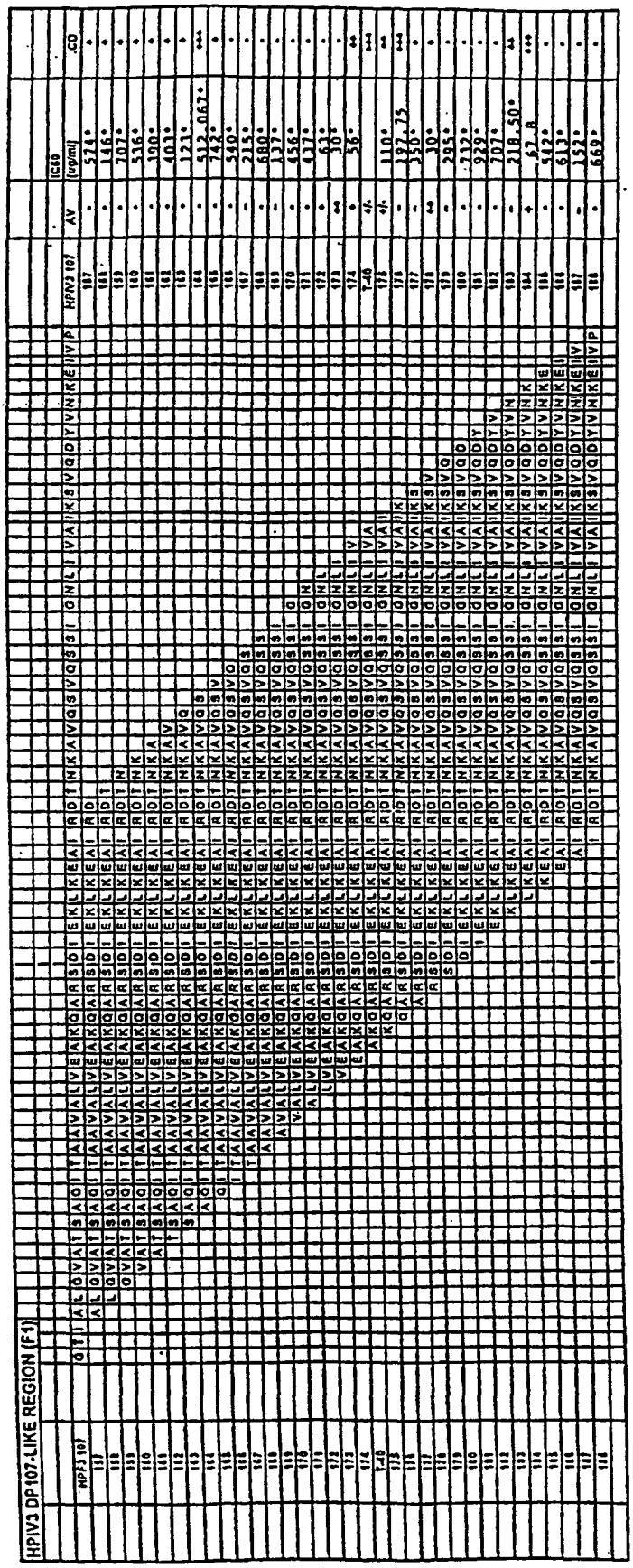


FIG. 29A

HPIV-3 DP107-Like Walks	AVG. IC50
T-42	843.000 ug/ml*
T-43	855.000 ug/ml*
T-39	720.000 ug/ml*
T-38	700.000 ug/ml*
T-40	56.788 ug/ml
T-44	225.140 ug/ml
T-45	486.000 ug/ml*
T-46	848.000 ug/ml*
T-562 truncated 184	137.854 ug/ml*

293

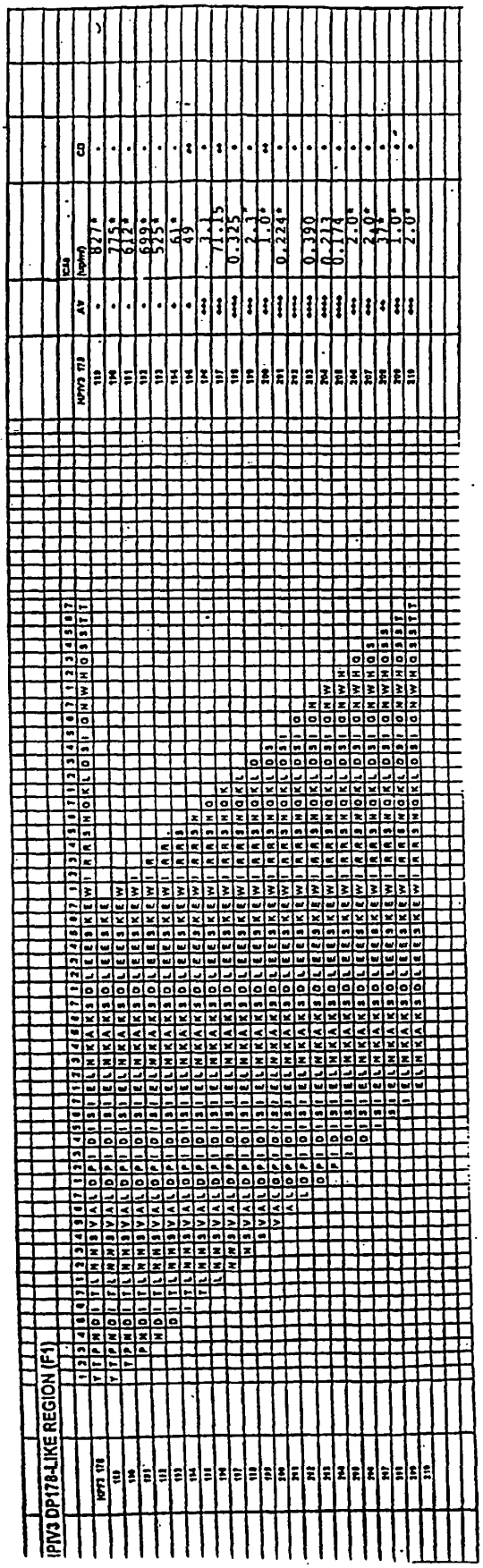


FIG. 30A

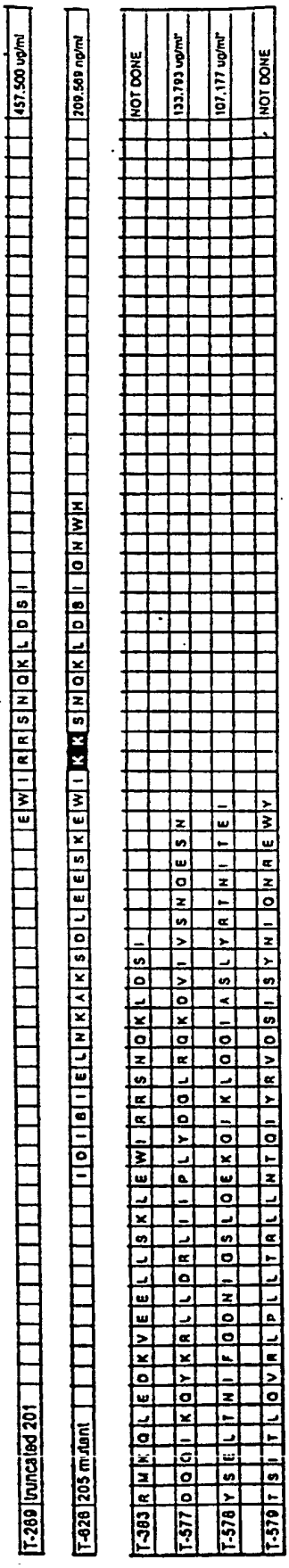

T-269 truncated 201
457.500 ug/ml
T-928 205 mutant
209.569 ng/ml
T-383
NOT DONE
T-577
133.793 ug/ml
T-578
107.177 ug/ml
T-579
NOT DONE

FIG. 30B

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
.....RNKRGVFVLGFLGFLATAGSAMGAAS ♠♥ XXXXAQSRTLLAGIVQQQQQ

LLDVVKRQQELLRLTVWGTKNLQTRVTAIEKYLKDQAQL♠NAWG♥ CAF

♥ALLMOTI5♥
*LVS Predicted Coiled -Coil
RQVCHTTVPWPNASLTPDW *NND ♥TWQEWERKVDFLEENITALLEEAQIQQ

♠107x178x4♠
EKNMY ♠ELQKLNSWD* VF♥ GNXXXXXXXXXXXXXXXXXXXXXXXXXXX♠

IYIVMLAKLRQGYRPVFSSPPSYFQXTHTQQDPALPTREGKEGDGGEGGGNSSWP

WQIEYIHF

FIG. 31

MTRRRVLSVVVLLAALACRLGAQTPEQPAPPATTVQPTATRQQTSFPFRVCELSSHGDLFRFSSD

♠107x178x4♠

IQCPSFGTRENHTEGLLMVFKDNIIPYSF ♠KVRSYTKIVTNILIYNGWYADSVTNRHE♠

EKFSVDSY ETDQMDTIYQ CYNAVKMTKD GLTRVYVDRD GVNITVNLKP TGGLANGVRR

YASQTELYDA PGWLIWTYRT RTTVNCLITD MMAKSNSPFD FFVTTTGQTV EMSPFYDGKN

KETFHERADS FHVRTNYKIV DYDNRGTNPQ GERRAFLDKG TYTLSWKLEN RTAYCPLQHW

QTFDSTIATE TGKSIHFVTD EGTSSFVTNT TVGIELPDAF KCIEEQVNKT HEKYEAVQD

RYTKGQEAIT YFITSGGLLL AWLPLTPRSL ATVKNLTELT TPTSSPPSSP SPPAPSAARG

STPAAVLRRR RRDAGNATTP VPPTAPGKSL GTLNNPATVQ IQFAYDSLRR QINRMLGDLA

RAWCLEQKRQ NMVLRELTKI NPTTVMSSIY GKAVAAKRLG DVISVSQCVP VNQATVTLRK

SMRVPGSETM CYSRPLVSFS FINDTKTYEG QLGTDNEIFL TKKMTEVCQA TSQYYFQSGN

♠107x178x4♠

EIHVYNDYHH FKTIELDGIA TLQTFISLNT ♠SLIENIDFASLELYSRDEQRASNVFD *LE♠

LVS Predicted Coiled Coil TM Potential

GIFREYNFQAQNIAGLRKDLDNAVSN* GRNQ FVDGLGELMDSLGSVG QSITN

♣P12LZIPC♣

TM Potential TM Potential

LVSTVGGLFSSLVSGFISF FK N ♣PFGGMLILVLVAGVVILVISL♣ TRRTRQMS

QQPVQMLYPG IDELAQQHAS GEGPGINPIS KTELQAIMLA LHEQNQEQKR AAQRAAGPSV

ASRALQAARDRFPGLRRRRY HDPETAAALL GEAETEF

FIG. 32

MMDPNSTSED VKFTPDPYQV PFVQAFDQAT RVYQDLGGPS QAPLPCVLWP VLPEPLPQGQ

LTAYHVSTAP TGSWFSAPQP APENAYQAYA APQLFPVSDI TQNQQTNQAG GEAPQPGDNS

TVQTAAAVVF ACPGANQGQQ LADIGVPQPA PVAAPARRTR KPQQPESLEE CDSELEI

@DNA Binding@ ♠107x178x4♠ +Dimerization+
@KRY KNRVASRKCRAK ♠FK@ Q +LLQHYREVAAAKSSENDRLRLLLKQ♠

MCPSLDVD+ SI IPRTPDVLHE DLLNF

FIG. 33

Fusion
Peptide ♥ALLMOTI5♥ *LVS Coiled-Coil*
FAG ♥VVLAGAALGVATAAQITAGIALHQSML*NSQAIDNLRASLETTN

QAIEAIRQAGQEMI*LAVQGVQDYINN♥ ELIPSMNQLSCDLIGQKLGLKLLRYYT

♣P23LZIPC♣
♣P6,12LZIPC♣
♠107x178x4♠
♥ALLMOTI5♥
EILSLFGPSLRD ♣PISA ♠♥EISIQALSYALGGDINKV♣ LEKLGYSGGDL♣

♣P1,12LZIPC♣
LGILES♠ RGIKARI♥ THVDTESYFIVLSIAY ♣PTLSEIKGVIVHRLEGV♣ SY

NIGSQEWYTTVPKYVATQGYLISNFDESSCTFMPEGTVCSQNALYPMSPLLQECL

RGSTKSCARTLVSGSFGNRFILSQGNLIANCASILCKCYTTGTIINQDPDKILTYIAA

♣P23LZIPC♣
♣P12LZIPC♣
♥ALLMOTI5♥
LVS Coiled-Coil
DHCPVVEVNGVTIQVGSRRYPDAVYLHRIDLGP ♣P ♥IS*LERLDVGTNLGN

♦Transmembrane Region♦
AIAKLEDAKELL♣ ESSDQI*L♣ RSMK ♦GLSSTSIVYILI♥ AVCLGGLIGIP

ALICCC♦ RGRCNKKGEQVGMSRPGLKPDLTGTSKSYVRSL

FIG. 34

Pre S1 and Pre S2

MGQNLSTSNPLGFFPDHQLDPAFRANTANPDWDFNPNKDTWPDANKVGAGAFG

LGFTPPHGGLLGWSPQAQGILQTLPANPPPASTNRQSGRQPTPLSPPLRNTHPQAM

QWNSTTFHQTLQDPRVRGLYFPAGGSSSGTVNPVLTTASPLSSIFSRIGDPALN

Major Surface Antigen (HBs)

Fusion
Peptide

∔P12 & 23LZIPC∔

MENITSG FLG ∔PLL VLQAGFFLLTRILTI∔ PQSLDSWWTSLNFLGGTTVCLG

∔P12 & 23LZIPC∔

QNSQSPTSNHSPTSCPPTC ∔PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML∔

PVCPLIPGSSTTSTGPCRTCMTTAQGTSMYPSCCCTKPSDGNCTCIPIPSSWAFGKF

♦Transmembrane Region♦

LWEWASARFSWLS ♦LLVPFVQWFVGLSPTVWLSVI♦ WMMWYWGPSL

♦Transmembrane Region♦

♦YSILSPFLPLLPIFFCLWVYI♦

FIG. 35

Fusion ♥ALLMOTI5♥ ♠107x178x4♠
Peptide *LVS Coiled Coil
AIQLIPLFVG LGI ♥TTAVSTGAAGLGVS ♠IT *QYTKLSHQLISDV

QAISSTIQDLQDQVDSLAEVVLQ* NRRGLDLLTAE♠ QGGI♥

CLALQEKCCFYANKSGIVRDKIKNLQDDLERRRRQLIDNPFWTSFHG

FLPYVMPLLGPLLCLLLVLSFGPIIFNKLMTFIKHQIESIQAKPIQVHYH

Transmembrane Region
RLEQEDSGGSYLTLT.....??????????????????????????.....

FIG 36

MKAQKGFTLI ELMIVVAIIG ILAAIAIPQ

♠107x178x4♠
♥ALLMOTI5♥
♠♥YQDYTARTQVTRAVSEVSALKTAAESAILEGKEIVSSA♠ T♥

PK DTQYDIGFT

♠107x178x4♠
♥ALLMOTI5♥
♠♥ESTLLDGSGKSQIQVTDNQDGTVELVATLGKSSGS♠AIKGAVITVSR♥

KNDGV WNCKITKTPT AWKPNYAPAN CPKS

FIG. 37

MNTLQKGFTL IELMIVIAIV GILAAVALPA YQDYTARAQV

SEAILLAEGQ KSAVTEYYLN HGIWP

♠107x178x4♠
♥ALLMOTI5♥
♠♥KDNTSAGVASSSSIKGKYVKEVKVENGVVTAT♠

MNSSNVNKEIQGKKLSLWAKRQDGSVKW♥

FCGQP VTRNAKDDTV TADATGNDGK IDTKHLPSTC RDNFDAS

FIG. 38

MKKTLLGSLI LLAFAGNVQA DINTETSGKV TFFGKVVENT

CKVKTEHKNL SVVLNDVGKN SLSTKVNTAM PTPFTITLQN

CDPTTANGTA NKANKVGLYF Y

♠107x178x4♠
♥ALLMOTI5♥
♠♥SWKNVDKENNFTLKNEQTTADYATNVNI♠

QLMESNGTKAISVVGKETE♥

DF MHTNNNGVAL NQTHPNNAHI SGSTQLTTGT NELPLHFIAQ

YYATNKATAG KVQSSVDFQI AYE

FIG. 39

MNKKLLMNFF IVSPLLLATT ATDFTPVP

♠107x178x4♠
♥ALLMOTI5♥
♠♥LSSNQIIKTAKASTNDNIKDLLDWYSSGSDTFTNS♠♥

EVLDNSL GSMRIKNTDG SISLIIFPSP YYSPAFTKGE KV

♠107x178x4♠
♠DLNTKRTKKSQHTSEGTYIHFQISGVT♠

N TEKLPTPIEL PLKVKVHGKD SPLKYG

♣P12LZIPC♣
♣PKFDKKQLAISTLDFEIRHQLTQI♣

HGLYRSSDKT GGYWKITMND GSTYQSDLSK KFEYNTEKPP

INIDEIKTIE AEIN

FIG. 40

♥ALLMOTI5♥
MKKTAFILLL FIALTLTTSP L ♥VNG

♠107x178x4♠
LVS Predicted Coiled-Coil
S ♠EKSEEINEKDLRKKSELQRNALSNLRQIY YYNEKAITENKESDD♠

QFLENTLL♥ FKG FFTGHPW

♠107x178x4♠
♠YNDLLVDLGSKDATNKYKGKKVDLYGAY♠

YGYQCAGGTPNKTACMYGGVTLHDN NRLTEEKKVP INLWIDGKQTTV

♣P12LZIPC♣
♣PIDKVKTSKKEVTVQELDL♣ QARHYLHGK FGLYNSDSFGGKVQ

♣P12LZIPC♣
RGLIVF HSSEGSTVSY DLFDAQGQY ♣P DTLLRIYRDN KTINSENLHI♣

DLYLYTT

FIG. 41

♥ALLMOTI5♥
MKKTAFTLLL FIALTLTTSP L ♥VNGS

♠107x178x4♠
♠EKSEEINEKDLRKKSELQGTALGNLKQIYYYNEKAKTENKESHD♠ Q♥

FLQHTILFKG FFTDHSWYND LLVDFDSKDI VDKYKGKKVDLYGAYY

GYQC AGGTPNKTAC MYGGVTLHDN NRLTEEKKVPINLWLDGKQNTV

♠107x178x4♠
♥ALLMOTI5♥
♣P12LZIPC♣
♣P ♥L ♠ETVKTNKKNVTVQELDLQARRYL♣ QEKYNLYN♠

SDVFDGKVQR♥ GLIVF HTSTE

♣P23LZIPC♣
♣PSVNYDLFGAQGQYSNTLLRIYRDNKTINSENMHI♣ DIYLYTS

FIG. 42

MKNITFIFFILLASPLYANGDRLYRADSRPPDEIKRFRSLMPRGNEYFDRGT

♥ALLMOTI5♥
♥QMNINLYDHARGTQTGFVRYDDGYV

♠107x178x4♠
♠STSLSLRSAHLAGQYILSGYSLTIYIVI♠ ANMFNVNDVISVY♥

SP HPYEQEVSAL GGIPYSQIYG WYRVNFGVID ERLHRNREYR

DRYYRNLNIA PAEDGYRLAG FPPDHQAWRE EPWIHHAPQG

CGDSSRTITG DTCNE

♥ALLMOTI5♥
♥ETQNLSTIYLREYQSKVKRQIFSDYQSEVDIYNRIRDEL♥

FIG. 43

MMFSGFNADY EASSSRCSSA SPAGDSLSYY HSPADSFSSM

GSPVNAQDFC TDLAVSSANF IPTVTAISTS PDLQWLVQPA

LVSSVAPSQT RAPHPFGVPA PSAGAYSRAG VVKTMTGGRA

LVS Predicted Coiled-Coil

QSIGRRGKVE QLSPEEEEKR RIRRE *RNKMA AAK

♠107x178x4♠

♥ALLMOTI5♥

♥CRNRRREL ♠TDTLQAETDQLEDEKSALQTEIANLLKEKEKL♥

EFILAAH R* PACKIPDDL GFPEEMSVAS LDLTGGLPEV

ATPESEEAFT LPLLNDPEPK PSVEPVKSIS SMELKTEPFD

DFLFPASSRP SGSETARSVP DMDLSGSFYA LPLLNDPEPK

PSVEPVKSIS SMELKTEPFD DFLFPASSRP SGSETARSVP

DMDLSGSFYA GSSSNEPSSD SLSSPTLLAL

FIG. 44

SGWESYYKTEGDEEAEEEQEENLEASGDYKYSGRDSLIFLVDASKA

MFESQSEDELTPFDMSIQCIQSVYISKIISSDRDLLAVVFYGTEKDKNS

VNFKNIYVLQELDNPGAKRILELDQFKGQQGQKRFQDMMGHGSDY

SLSEVLWVCANLFSDVQFKMSHKRIMLFTNEDNPHGNDSAKASRAR

TKAGDLRDTGIFLDLMHLKKPGGFDISLFYRDIISIAEDED

♠107x178x4♠

♥ALLMOTI5♥

LVS Predicted Coiled-Coil

♥LRVH *FEE ♠SSKLEDLLRKVRAKETRKRALSRLKLKLNKDIV* ISV

GIYNLVQKAL♥ KPPPIKLYRETN♠ EPVKTKTRTFNTSTGGLLLPSDTKR

SQIYGSRQIILEKEETEELKRFDDPGLMLMGFKPLVLLKKHHLRPSLFVYPE

ESLVIGSSTLFSALLIKCLEKEVAALCRYTPRRNIPPYFVALVPQEEELDDQK

IQVTPPGFQLVFLPFADDKRKMPFTEKIMATPEQVGKMKAIVEKLRFTYRS

DSFENPVLQQHFRNLEALALDLME

♣P12LZIPC♣

♣PEQAVDLTLPKVEAMNKRL♣ GSLVDEFKELVYPPDYNPEGKVTKR

KHDNEGSGSKRPKVEYSEEELKTHISKGTLGKFTVPMLKEACRAYGLKSG

LKKQELLEALTKHFQD

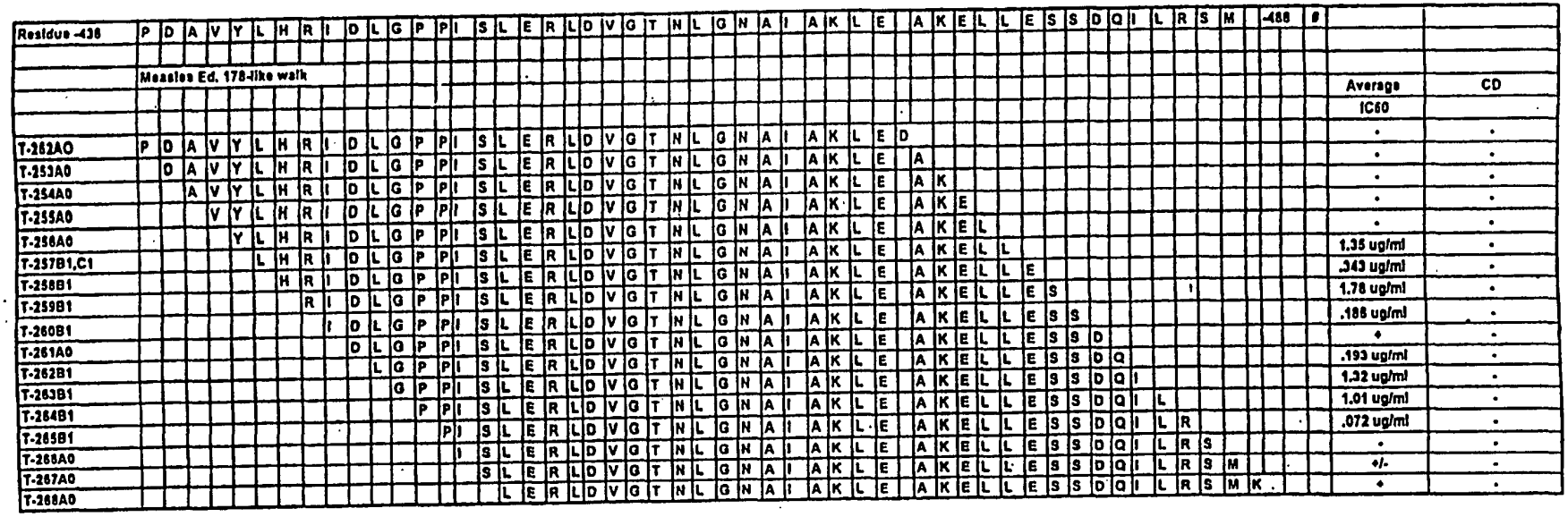
FIG. 45

GGGALSPQHSAVTQGSIIKNKEGMDAKS

♠107x178x4♠
♥ALLMOTI5♥
♥♠LTAWSRTLVTFKDVFVDFTREEWKLLDT♠ AQQIVYRNV
MLENYKNLVSLGYQLT♥ KPDVILRLEKGEEPWLVEREIHQETHPD
SETAFEIKSSVSSRSIFKDKQSCDIKMEGMARNDLWYLSLEEVWKCR
DQLDKYQENPERHLRHQLIHTGEKPYECKECGKSFSRSSHLIGHQKT
HTGEEPYECKECGKSFSWFSHLVTHQRTHTGDKLYTCNQCGKSFVH
SSRLIRHQRTHTGHKPYECPECGKSFRQSTHLILHQRTHVRVRPYECN
ECGKSYSQRSHLVVHHRIHTGLKPFECKDCGKCFSRSSHLYSHQRTH
TGEKPYECHDCGKSFSQSSALIVHQRIHTGEKPYECCQCGKAFIRKN
DLIKHQRIHVGAETYKCNQCGIIFSQNS

♣P23LZIPC♣
♣PFIVHQIAHTGEQFLTCNQCGTALVNTSNLIGYQTNHI♣ RENAY

FIG. 46



Residue #436	P	D	A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M	#486	#	Average IC60	CD
	Measles Ed. 178-like walk																																																					
T-252A0	P	D	A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	D																				
T-253A0		D	A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A																				
T-254A0			A	V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K																				
T-255A0				V	Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E																				
T-256A0					Y	L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L																			1.35 ug/ml	
T-257B1,C1						L	H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E																.343 ug/ml	
T-258B1							H	R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S															1.76 ug/ml	
T-259B1								R	I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S														.186 ug/ml	
T-260B1									I	D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D													+	
T-261A0										D	L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q													.193 ug/ml	
T-262B1											L	G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I											1.32 ug/ml	
T-263B1												G	P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L									1.01 ug/ml	
T-264B1													P	P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R								.072 ug/ml	
T-265B1														P	I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S							-	
T-266A0															I	S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M							+/-	
T-267A0																S	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M	K							+	
T-268A0																	L	E	R	L	D	V	G	T	N	L	G	N	A	I	A	K	L	E	A	K	E	L	L	E	S	S	D	Q	I	L	R	S	M	K								

FIG. 47

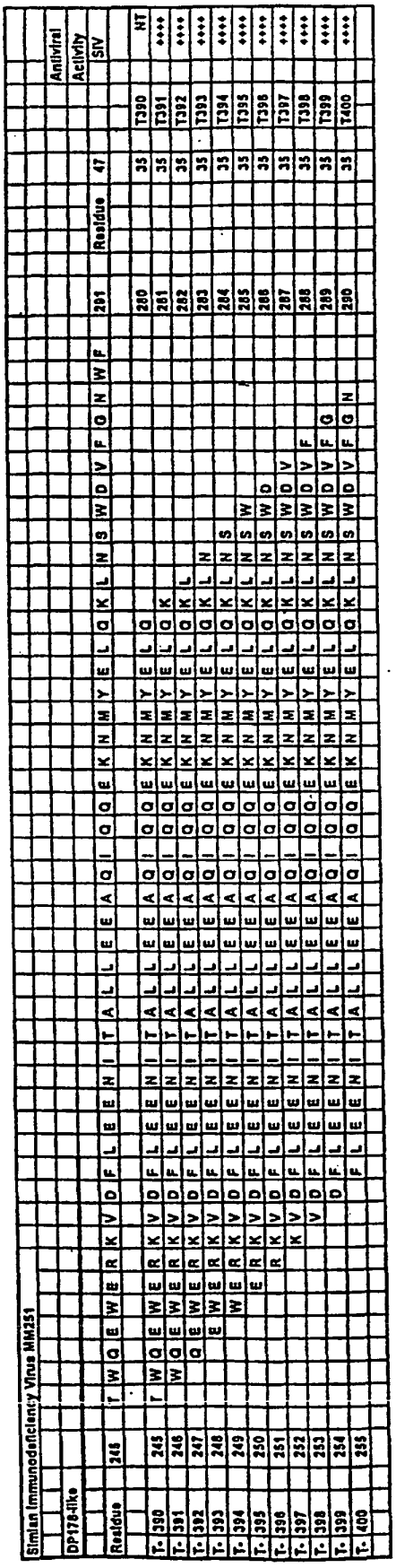


FIG. 48

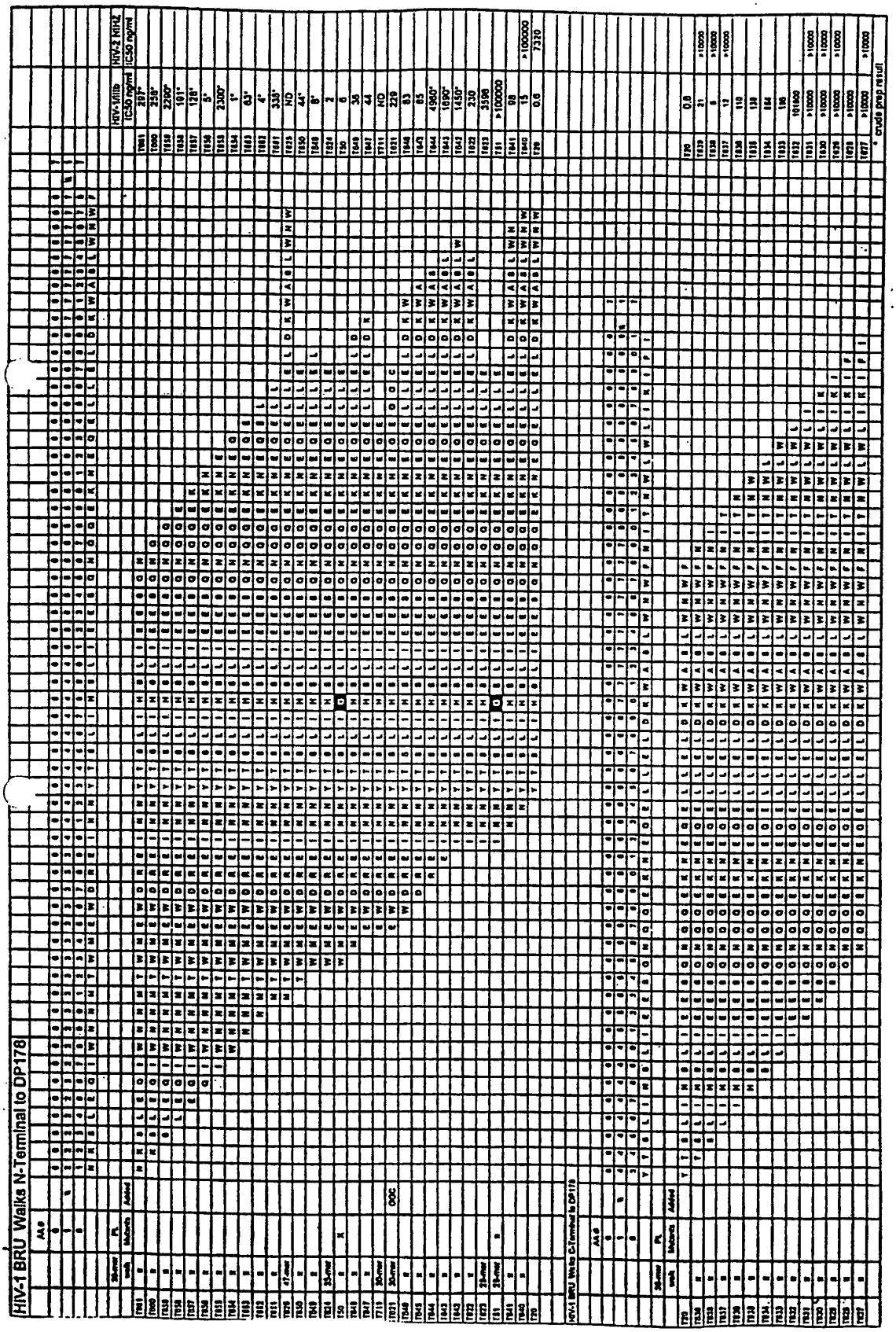

HIV-1 BRU Walks N-Terminal to DP178
HIV-1 BRU Walks C-Terminal to DP178
HIV-1 IIIIb IC50 ng/ml
HIV-2 NIH2 IC50 ng/ml
* crude prep result

FIG. 494

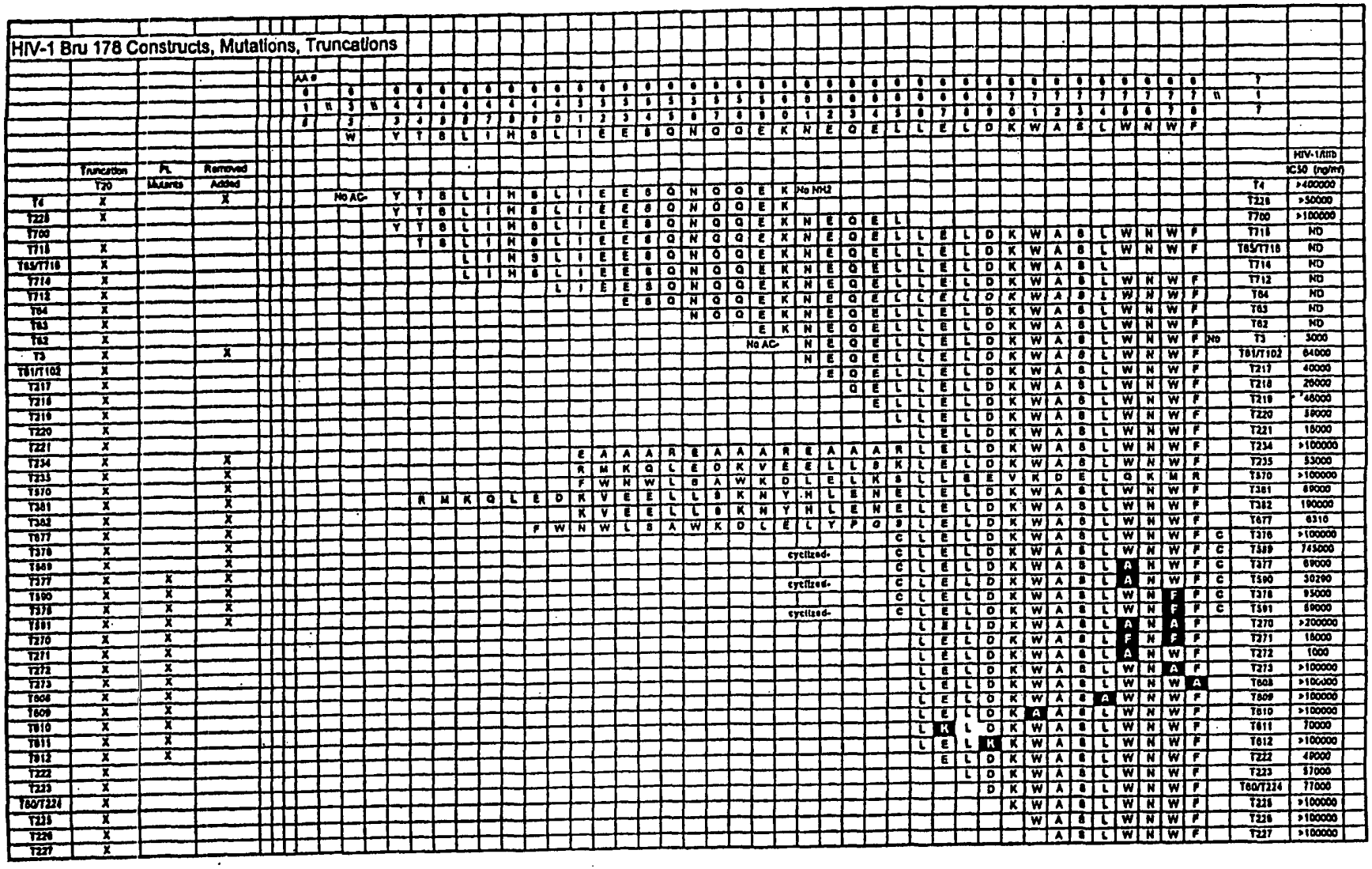

HIV-1 Bru 178 Constructs, Mutations, Truncations
Truncation
T20
PL Mutants
Removed
Added
No AC-
No NH2
HIV-1/IIIb
IC50 (ng/ml)
T4 >400000
T226 >50000
T700 >100000
T718 ND
T85/T718 ND
T714 ND
T712 ND
T84 ND
T83 ND
T82 ND
T3 3000
T81/T102 64000
T217 40000
T218 29000
T219 46000
T220 59000
T221 16000
T234 >100000
T235 53000
T370 >100000
T381 69000
T382 190000
T677 6316
T376 >100000
T389 745000
T377 69000
T390 30290
T378 95000
T391 69000
T270 >200000
T271 16000
T272 1000
T273 >100000
T808 >100000
T809 >100000
T810 >100000
T811 70000
T812 >100000
T222 49000
T223 57000
T80/T224 77000
T225 >100000
T226 >100000
T227 >100000

FIG. 49B

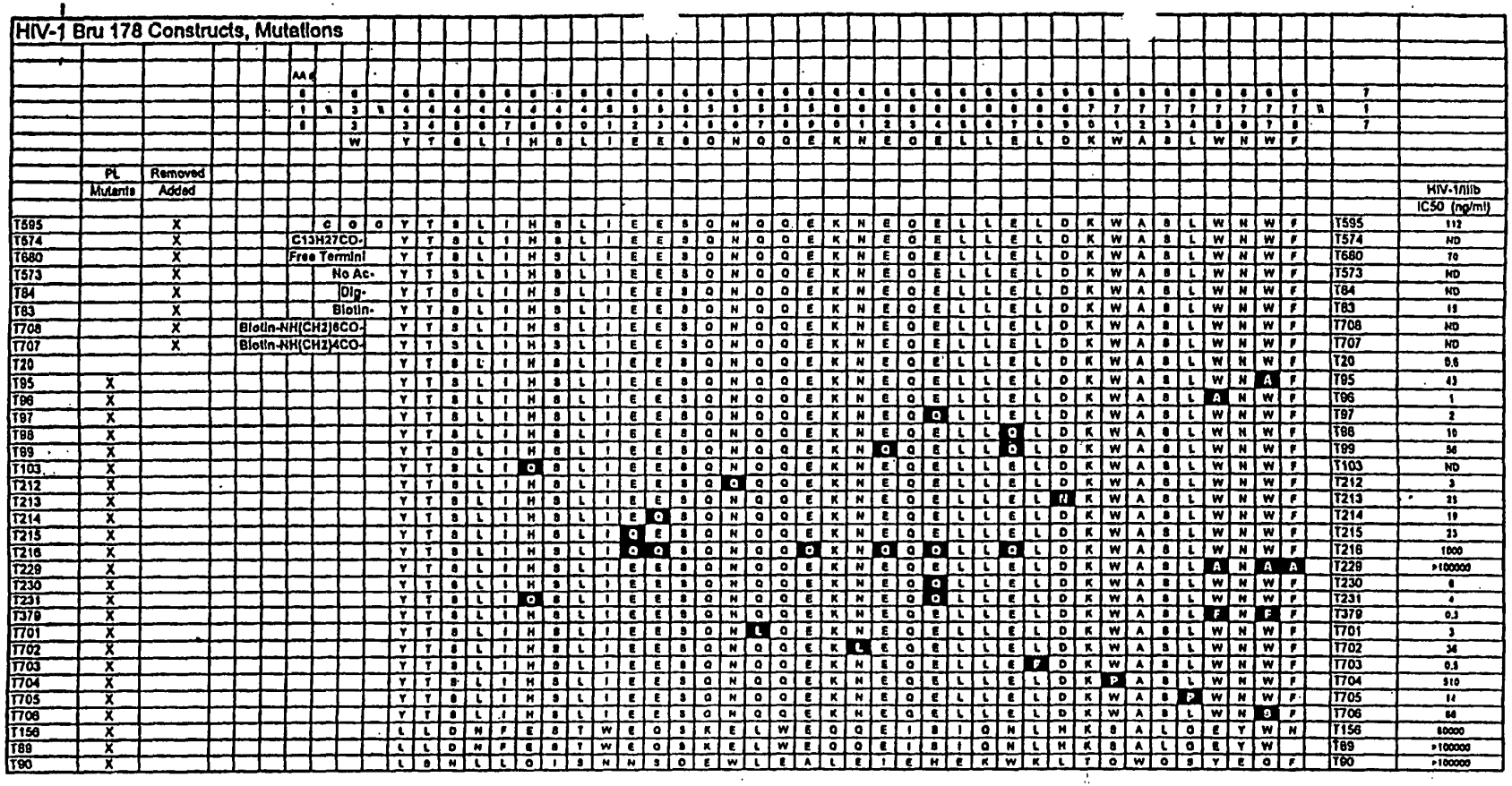
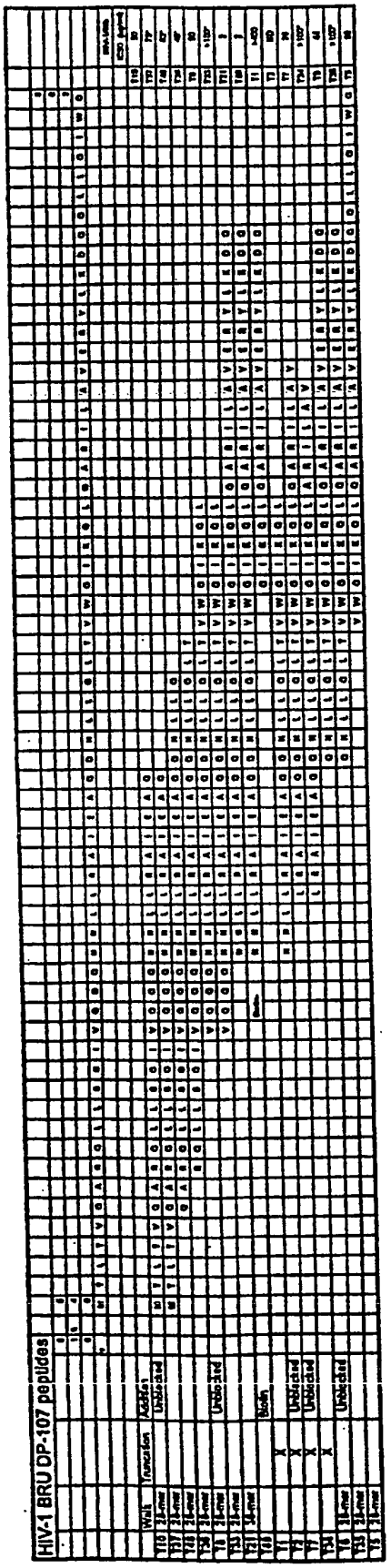

HIV-1 Bru 178 Constructs, Mutations
PL Mutants
Removed
Added
HIV-1/IIIb IC50 (ng/ml)
T595 X 112
T574 X C13H27CO- ND
T680 X Free Termini 70
T573 X No Ac- ND
T84 X Dig- ND
T83 X Biotin- 15
T708 X Biotin-NH(CH2)6CO- ND
T707 X Biotin-NH(CH2)4CO- ND
T20 0.5
T95 X 43
T96 X 1
T97 X 2
T98 X 10
T99 X 56
T103 X ND
T212 X 3
T213 X 25
T214 X 19
T215 X 23
T216 X 1000
T229 X >100000
T230 X 8
T231 X 4
T379 X 0.3
T701 X 3
T702 X 34
T703 X 0.5
T704 X 510
T705 X 14
T706 X 66
T156 X 80000
T89 X >100000
T90 X >100000

FIG. 49C


HIV-1 BRU DP-107 peptides
Wash
Truncation
Addition
Undiluted
Wash
Undiluted
Undiluted
Undiluted

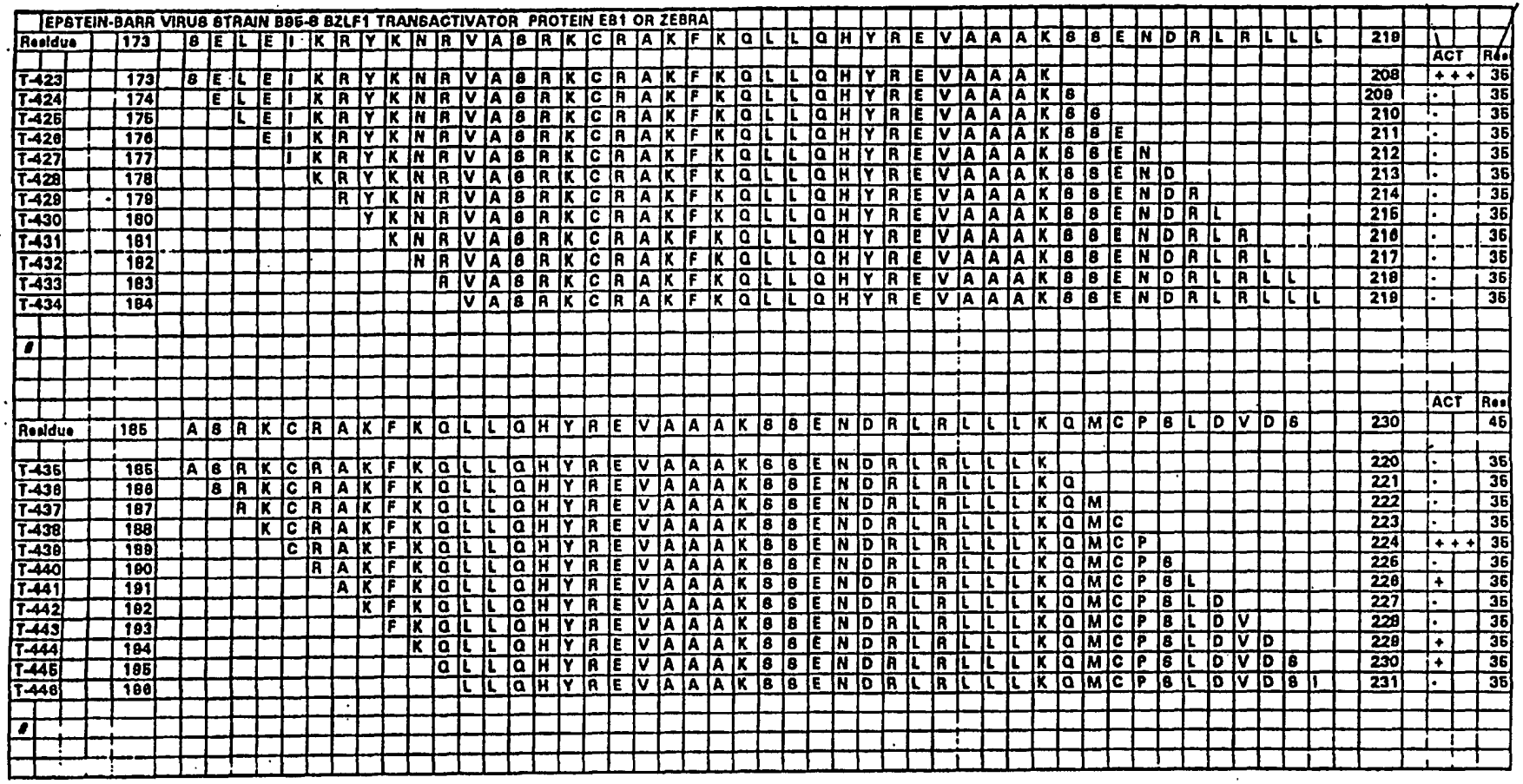


FIG. 51A

EP 0 793 675 B9 (W1B1)

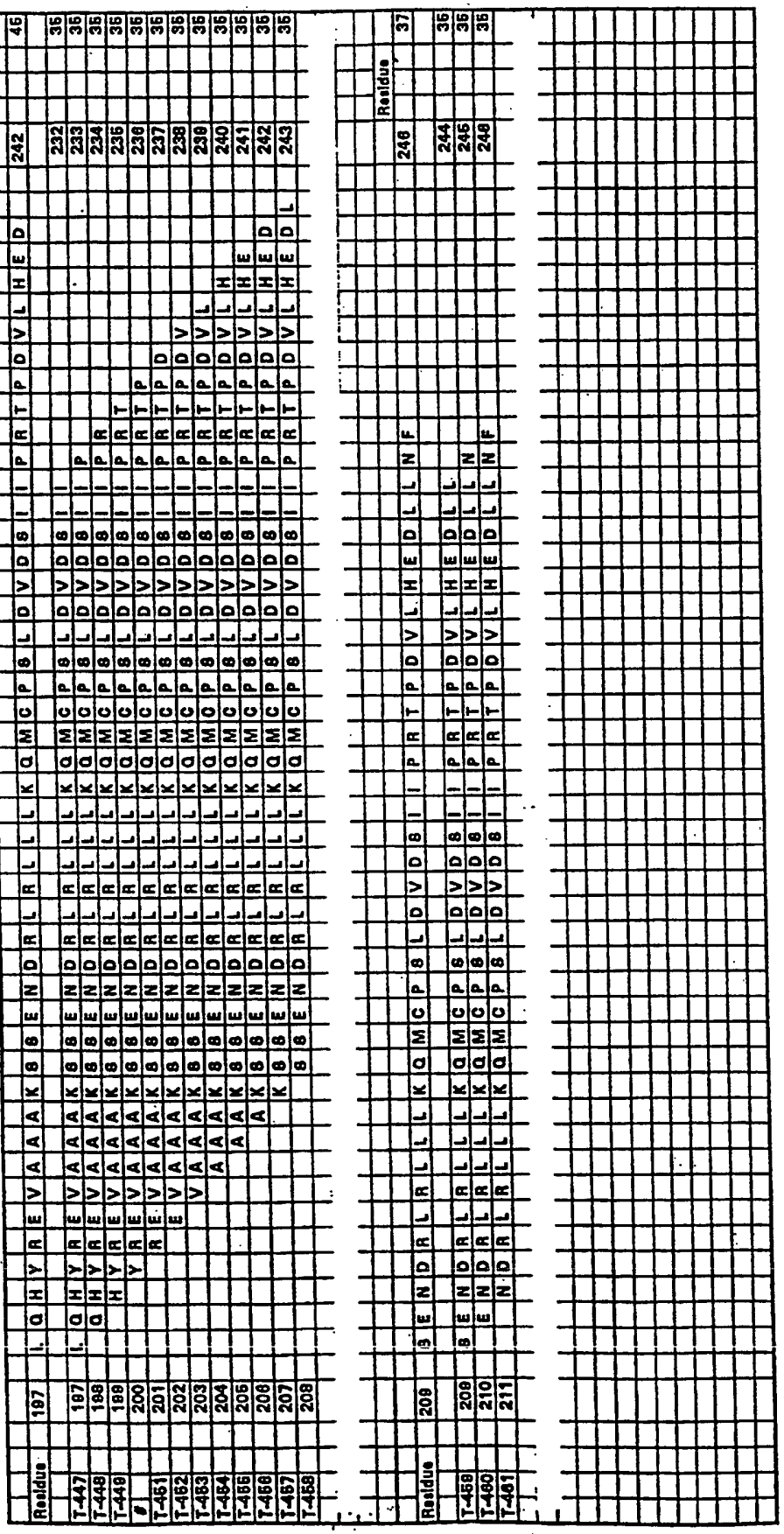


FIG. 518

Domain I:

174P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-G-T-T-V-C-L-G-Q-N-S-Q-S-P220

P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T
L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-N-W-T-S-L-N-F-L-G-G-T-T
L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V
V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C
L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L
Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G
A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q
G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N
F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S
F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q
L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q-S

FIG. 52A

Domain II:

223P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-FI-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T291

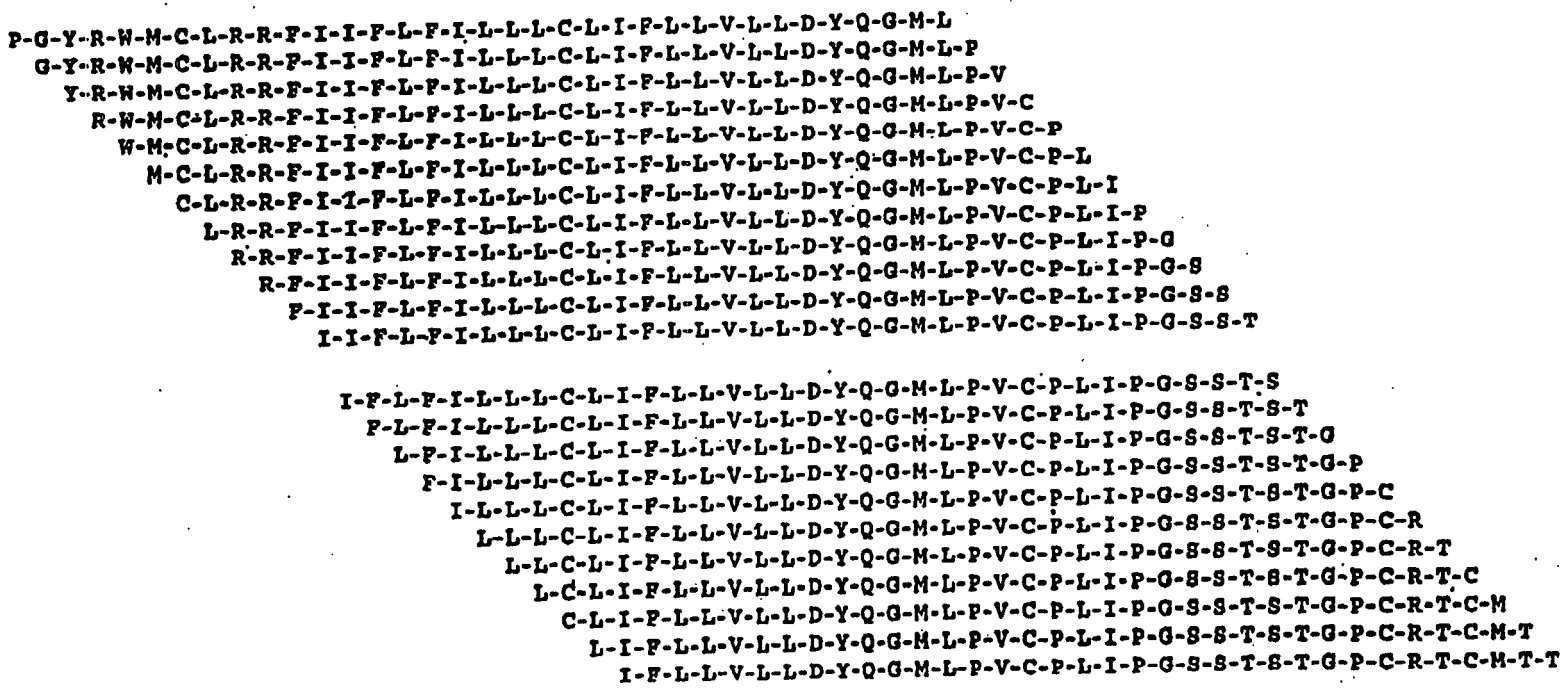


FIG. 52B