

Title (en)
IMPROVED HELPER DEPENDENT VECTOR SYSTEM FOR GENE THERAPY

Title (de)
VERBESSERTES HELFERABHÄNGIGES VEKTORSYSTEM FÜR DIE GENTHERAPIE

Title (fr)
AMELIORATION DU SYSTEME VECTEUR DEPENDANT D'UN ASSISTANT POUR LA THERAPIE GENIQUE

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Abstract (en)
[origin: WO0046360A1] The present invention features helper-dependent adenoviral vector elements, and helper adenoviral elements, that enhance the production and isolation of helper-dependent adenoviral vectors. Such elements include a modified packaging signal having low homology to, and preferably less activity than, a wild-type packaging signal, an E4 non-coding segment directly joined to the 5' ITR that confers a selective advantage, and stuffer region(s) that provide a helper-dependent adenoviral vector with a GC content of about 50 % to about 60 %. The modified packaging signal is preferably used in a helper virus to decrease recombination and generation of the virus. The E4 non-coding segment and the stuffer region(s) are preferably used in a helper-dependent adenoviral vector to provide the vector with a growth advantage over a helper virus.

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Citation (search report)
• [XY] WO 9732481 A1 19970912 - UNIV CALIFORNIA [US], et al
• [Y] WO 9813510 A1 19980402 - GRAHAM FRANK L [CA], et al
• [Y] WO 9640955 A1 19961219 - GRAHAM FRANK L [CA], et al
• [A] WO 9748806 A1 19971224 - MERCK & CO INC [US], et al
• [Y] PARKS R J ET AL: "A HELPER DEPENDENT ADENOVIRUS VECTOR SYSTEM: REMOVAL OF HELPER VIRUS BY CRE-MEDIATED EXCISION OF THE VIRAL PACKAGING SIGNAL", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 93, no. 24, 26 November 1996 (1996-11-26), pages 13565 - 13570, XP000617948, ISSN: 0027-8424
• [Y] GRABLE M ET AL: "ADENOVIRUS TYPE 5 PACKAGING DOMAIN IS COMPOSED OF A REPEATED ELEMENT THAT IS FUNCTIONALLY REDUNDANT", JOURNAL OF VIROLOGY, NEW YORK, US, US, vol. 64, no. 5, May 1990 (1990-05-01), pages 2047 - 2056, XP000996013, ISSN: 0022-538X
• [Y] HARDY S ET AL: "CONSTRUCTION OF ADENOVIRUS VECTORS THROUGH CRE-LOX RECOMBINATION", JOURNAL OF VIROLOGY, THE AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 71, no. 3, 1 March 1997 (1997-03-01), pages 1842 - 1849, XP000670223, ISSN: 0022-538X
• [A] ILAN Y ET AL: "Insertion of the adenoviral E3 region into a recombinant viral vector prevents antiviral humoral and cellular immune responses and permits long-term gene expression", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 94, no. 6, 1997, pages 2587 - 2592, XP002143015, ISSN: 0027-8424
• [A] MITTAL SURESH K ET AL: "Induction of systemic and mucosal immune responses in cotton rats immunized with human adenovirus type 5 recombinants expressing the full and truncated forms of bovine herpesvirus type 1 glycoprotein gD.", VIROLOGY, vol. 222, no. 2, 1996, pages 299 - 309, XP002196740, ISSN: 0042-6822
• See also references of WO 0046360A1

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