

Title (en)

A BINDING MOTIF OF A RECEPTOR

Title (de)

REZEPTOR-BINDUNGSMOTIV

Title (fr)

MOTIF DE LIAISON D'UN RECEPTEUR

Publication

EP 1218404 A4 20040407 (EN)

Application

EP 00963808 A 20000915

Priority

- AU 0001118 W 20000915
- AU PQ287599 A 19990915
- AU PQ873300 A 20000712

Abstract (en)

[origin: WO0119847A1] The present invention relates to a binding motif of a receptor. In particular, the binding motif is a cytoplasmic domain associated with stimulation of receptor mediated activities. The present invention further contemplates methods of using the motif in particular for mediating activities of receptors. In one aspect of the present invention, there is provided a binding motif of a receptor capable of binding a cytoplasmic protein, said binding motif comprising an amino acid sequence wherein at least one amino acid is serine/threonine preferably there are at least two serines to indicate the cytoplasmic binding motif. Preferably the binding motif comprises an amino acid sequence including the sequence: -S-X-S/T- wherein the X is any amino acid.

IPC 1-7

C07K 2/00; C07K 7/06; C07K 14/71; C07K 14/715; A61K 38/19; A61K 38/20; A61P 35/00; A61P 43/00; C07K 14/705; G01N 33/50; A61K 38/17; C07K 14/72; C12N 15/12; C12N 15/52; C12N 9/16

IPC 8 full level

A61P 35/00 (2006.01); A61P 43/00 (2006.01); C07K 14/71 (2006.01); C07K 14/715 (2006.01); A61K 38/00 (2006.01)

CPC (source: EP)

A61P 35/00 (2017.12); A61P 43/00 (2017.12); C07K 14/71 (2013.01); C07K 14/715 (2013.01); A61K 38/00 (2013.01)

Citation (search report)

- [XY] WO 9201788 A1 19920206 - SCHERING CORP [US]
- [A] WO 9748728 A1 19971224 - KOSTER HENK WILHELMUS [MC], et al
- [XY] US 5677144 A 19971014 - ULLRICH AXEL [DE], et al
- [XDX] DATABASE SWISSPROT [online] 1 October 1993 (1993-10-01), XP002238516, accession no. EBI Database accession no. p32927
- [Y] GONDA THOMAS J ET AL: "Activating mutations in cytokine receptors: Implications for receptor function and role in disease.", BLOOD, vol. 89, no. 2, 1997, pages 355 - 369, XP002238511, ISSN: 0006-4971
- [Y] MUSLIN A J ET AL: "Interaction of 14-3-3 with signaling proteins is mediated by the recognition of phosphoserine", CELL, CELL PRESS, CAMBRIDGE, MA, US, vol. 84, 22 March 1996 (1996-03-22), pages 889 - 897, XP002089347, ISSN: 0092-8674
- [A] BAGLEY C J ET AL: "THE STRUCTURAL AND FUNCTIONAL BASIS OF CYTOKINE RECEPTOR ACTIVATION: LESSONS FROM THE COMMON BETA SUBUNIT OF THE GRANULOCYTE-MACROPHAGE COLONY-STIMULATING FACTOR, INTERLEUKINS-3 (IL-3), AND IL-5 RECEPTORS", BLOOD, W.B. SAUNDERS, PHILADELPHIA, VA, US, vol. 89, no. 5, 1 March 1997 (1997-03-01), pages 1471 - 1482, XP001052641, ISSN: 0006-4971
- [A] DE GROOT ROLF P ET AL: "Regulation of proliferation, differentiation and survival by the IL-3/IL-5/GM-CSF receptor family.", CELLULAR SIGNALLING, vol. 10, no. 9, October 1998 (1998-10-01), pages 619 - 628, XP002238512, ISSN: 0898-6568
- [A] JUCKER MANFRED ET AL: "Identification of a new adapter protein that may link the common beta subunit of the receptor for granulocyte/macrophage colony-stimulating factor, interleukin (IL)-3, and IL-5 to phosphatidylinositol 3-kinase.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 46, 1995, pages 27817 - 27822, XP002238513, ISSN: 0021-9258
- [A] SMITH ALISON ET AL: "Cytoplasmic domains of the common beta-chain of the GM-CSF/IL-3/IL-5 receptors that are required for inducing differentiation or clonal suppression in myeloid leukaemic cell lines.", EMBO (EUROPEAN MOLECULAR BIOLOGY ORGANIZATION) JOURNAL, vol. 16, no. 3, 1997, pages 451 - 464, XP002238514, ISSN: 0261-4189
- [A] SAKAMAKI K ET AL: "CRITICAL CYTOPLASMIC DOMAINS OF THE COMMON BETA SUBUNIT OF THE HUMAN GM-CSF, IL-3 AND IL-5 RECEPTORS FOR GROWTH SIGNAL TRANSDUCTION AND TYROSINE PHOSPHORYLATION", EMBO JOURNAL, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 11, no. 10, 1992, pages 3541 - 3549, XP002070273, ISSN: 0261-4189
- [A] LIU Y-C ET AL: "Serine phosphorylation of Cbl induced by phorbol ester enhances its association with 14-3-3 proteins in T cells via a novel serine-rich 14-3-3-binding motif", JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 272, no. 15, 11 April 1997 (1997-04-11), pages 9979 - 9985, XP002089346, ISSN: 0021-9258
- [A] SUN Q ET AL: "Simultaneous antagonism of interleukin-5, granulocyte-macrophage colony-stimulating factor, and interleukin-3 stimulation of human eosinophils by targetting the common cytokine binding site of their receptors.", BLOOD, vol. 94, no. 6, pages 1943 - 1951, XP002238515, ISSN: 0006-4971
- [XY] ZHANG SHAO-HUI ET AL: "Serine phosphorylation-dependent association of the band 4.1-related protein-tyrosine phosphatase PTPH1 with 14-3-3-beta protein", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 272, no. 43, 1997, pages 27281 - 27287, XP002267717, ISSN: 0021-9258
- [A] BONNEFOY-BERARD NATHALIE ET AL: "Inhibition of phosphatidylinositol 3-kinase activity by association with 14-3-3 proteins in T cells", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 92, no. 22, 1995, 1995, pages 10142 - 10146, XP002267718, ISSN: 0027-8424
- [XY] HIBI M ET AL: "MOLECULAR CLONING AND EXPRESSION OF AN IL-6 SIGNAL TRANSDUCER, GP130", CELL, CELL PRESS, CAMBRIDGE, MA, US, vol. 63, 21 December 1990 (1990-12-21), pages 1149 - 1157, XP001073990, ISSN: 0092-8674 & DATABASE UNIPROT [online] 1 February 1995 (1995-02-01), XP002267721, accession no. EBI Database accession no. P40189
- [A] MURAKAMI M ET AL: "Critical cytoplasmic region of the interleukin 6 signal transducer gp130 is conserved in the cytokine receptor family", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 88, December 1991 (1991-12-01), pages 11349 - 11353, XP002954109, ISSN: 0027-8424
- [XY] TARTAGLIA L A ET AL: "IDENTIFICATION AND EXPRESSION CLONING OF A LEPTIN RECEPTOR, OB-R", CELL, CELL PRESS, CAMBRIDGE, MA, US, vol. 83, no. 7, 29 December 1995 (1995-12-29), pages 1263 - 1271, XP000602068, ISSN: 0092-8674 & DATABASE UNIPROT [online] 1 February 1996 (1996-02-01), XP002267722, accession no. EBI Database accession no. P48357

- [A] LI CAI ET AL: "Leptin receptor activation of SH2 domain containing protein tyrosine phosphatase 2 modulates Ob receptor signal transduction", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 96, no. 17, 17 August 1999 (1999-08-17), pages 9677 - 9682, XP002185670, ISSN: 0027-8424
- [XY] SMITH C A ET AL: "A receptor for tumor necrosis factor defines an unusual family of cellular and viral proteins", SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE., US, vol. 248, 25 May 1990 (1990-05-25), pages 1019 - 1022-1023, XP002107350, ISSN: 0036-8075 & DATABASE UNIPROT [online] 1 February 1995 (1995-02-01), XP002267723, accession no. EBI Database accession no. P20333
- [A] NG PATRICK W P ET AL: "Mutations which abolish phosphorylation of the TRAF-binding domain of TNF receptor 2 enhance receptor-mediated NF-kappaB activation", BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 244, no. 3, 27 March 1998 (1998-03-27), pages 756 - 762, XP002267719, ISSN: 0006-291X
- [A] DARNAY B G ET AL: "The p80TNF receptor-associated kinase (p80TRAK) associates with residues 354-397 of the p80 cytoplasmic domain: similarity to casein kinase", FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 406, no. 1-2, 7 April 1997 (1997-04-07), pages 101 - 105, XP004261192, ISSN: 0014-5793
- [XY] SHIBUYA M ET AL: "NUCLEOTIDE SEQUENCE AND EXPRESSION OF A NOVEL HUMAN RECEPTOR-TYPE, TYROSINE KINASE GENE (FLT) CLOSELY RELATED TO THE FMS FAMILY", ONCOGENE, BASINGSTOKE, HANTS, GB, vol. 5, 1990, pages 519 - 524, XP000569874, ISSN: 0950-9232 & DATABASE UNIPROT [online] 1 November 1990 (1990-11-01), XP002267724, accession no. EBI Database accession no. P17948
- [A] GERBER HANS-PETER ET AL: "Vascular endothelial growth factor regulates endothelial cell survival through the phosphatidylinositol 3'-kinase/Akt signal transduction pathway: Requirement for Flk-1/KDR activation", JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 273, no. 46, 13 November 1998 (1998-11-13), pages 30336 - 30343, XP002155564, ISSN: 0021-9258
- [XY] KARN T ET AL: "STRUCTURE, EXPRESSION AND CHROMOSOMAL MAPPING OF TKT FROM MAN AND MOUSE: A NEW SUBCLASS OF RECEPTOR TYROSINE KINASES WITH A FACTOR VIII-LIKE DOMAIN", ONCOGENE, BASINGSTOKE, HANTS, GB, vol. 8, no. 12, 1 December 1993 (1993-12-01), pages 3433 - 3440, XP000471876, ISSN: 0950-9232 & DATABASE SWISSPROT [online] 1 November 1997 (1997-11-01), XP002267725, accession no. EBI Database accession no. Q16832
- [XY] MASIAKOWSKI PIOTR ET AL: "A novel family of cell surface receptors with tyrosine kinase-like domain", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 267, no. 36, 1992, pages 26181 - 26190, XP002267720, ISSN: 0021-9258
- See references of WO 0119847A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0119847 A1 20010322; EP 1218404 A1 20020703; EP 1218404 A4 20040407

DOCDB simple family (application)

AU 0001118 W 20000915; EP 00963808 A 20000915