CXCR4 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CXCR4, Polyclonal Antibody
Full Product Name	CXCR4, NT (C-X-C Chemokine Receptor Type 4, FB22, Fusin, HM89, LCR1, Leukocyte-derived Seven Transmembrane Domain Receptor, NPYRL, Stromal Cell-derived Factor 1 Receptor, CD184) (AP)
Product Gene Name	anti-CXCR4 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes the N-terminal domain of CXCR4.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	39,746 Da
Chromosome Location	Chromosome: 2; NC_000002.11 (136871919..136875725, complement). Location: 2q21
OMIM	162643
3D Structure	ModBase 3D Structure for P61073
Immunogen	Peptide corresponding to the N-terminal domain of human CXCR4.
Conjugate	AP
Note	Preservative Free
Product Categories/Family for anti-CXCR4 antibody	Antibodies; Growth Factors; Cytokines
Applications Tested/Suitable for anti-CXCR4 antibody	Immunocytochemistry (ICC), Western Blot (WB), Immunoprecipitation (IP)
Application Notes for anti-CXCR4 antibody	ICC: 10ug/ml WB: 1-2ug/ml Applications are based on unconjugated antibody.
Related Product Information for anti-CXCR4 antibody	MBS6444644 is an antibody targeting CXCR4. Also known as CXCR4, NT (C-X-C Chemokine Receptor Type 4, FB22, Fusin, HM89, LCR1, Leukocyte-derived Seven Transmembrane Domain Receptor, NPYRL, Stromal Cell-derived Factor 1 Receptor, CD184) (AP). Reactive in Human. Host: Rabbit.

Product References and Citations for anti-CXCR4 antibody	1. Androgens Induce Functional CXCR4 through ERG Factor Expression in TMPRSS2-ERG Fusion-Positive Prostate Cancer Cells. Cai, Juan, et al. (2010) Transl Oncol, 3: 195-203 (2010). 2. Stromal cell-derived factor 1alpha mediates neural progenitor cell motility after focal cerebral ischemia. Adam M Robin, Zheng G Zhang, Lei Wang, Rui L Zhang, Mark Katakowski, Li Zhang, Ying Wang, Chunling Zhang, Michael Chopp (2006) Journal of cerebral blood flow and metabolism: official journal of the International Society of Cerebral Blood Flow and Metabolism.26:125-34 3. CD44 and hyaluronic acid cooperate with SDF-1 in the trafficking of human CD34+ stem/progenitor cells to bone marrow. Abraham Avigdor, Polina Goichberg, Shoham Shivtiel, Ayelet Dar, Amnon Peled, Sarit Samira, Orit Kollet, Rami Hershkoviz, Ronen Alon, Izhar Hardan, Herzl Ben-Hur, David Naor, Arnon Nagler, Tsvee Lapidot (2004) Blood.103:2981-9 4. How do viruses enter cells? The HIV coreceptors teach us a lesson of complexity. Dimitrov, D S (1997) Cell, 91: 721-30 (1997).
Other Notes	Small volumes of anti-CXCR4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CXCR4. It may not necessarily be applicable to this product.

NCBI GI #	56790927
NCBI GeneID	7852
NCBI Accession #	NP_001008540.1
UniProt Primary Accession #	P61073
UniProt Secondary Accession #	O60835; P30991; P56438; Q53S69; Q9BXA0; Q9UKN2; B2R5N0
UniProt Related Accession #	P61073
GenBank Nucleotide #	NM_001008540.1
NCBI Official Full Name	C-X-C chemokine receptor type 4 isoform a
NCBI Official Synonym Full Names	chemokine (C-X-C motif) receptor 4
NCBI Official Symbol	CXCR4
NCBI Official Synonym Symbols	FB22; HM89; LAP3; LCR1; NPYR; WHIM; CD184; LESTR; NPY3R; NPYRL; HSY3RR; NPYY3R; D2S201E
UniProt Protein Name	C-X-C chemokine receptor type 4
UniProt Synonym Protein Names	FB22; Fusin; HM89; LCR1; Leukocyte-derived seven transmembrane domain receptor; LESTR; NPYRL; Stromal cell-derived factor 1 receptor
Protein Family	C-X-C chemokine receptor
UniProt Gene Name	CXCR4
UniProt Synonym Gene Names	CXC-R4; CXCR-4; LESTR
UniProt Entry Name	CXCR4_HUMAN
NCBI Protein Information	C-X-C chemokine receptor type 4; fusin; CXC-R4; CXCR-4; CD184 antigen; SDF-1 receptor; neuropeptide Y receptor Y3; seven transmembrane helix receptor; stromal cell-derived factor 1 receptor; lipopolysaccharide-associated protein 3; seven-transmembrane-seg
NCBI Summary for CXCR4	This gene encodes a CXC chemokine receptor specific for stromal cell-derived factor-1. The protein has 7 transmembrane regions and is located on the cell surface. It acts with the CD4 protein to support HIV entry into cells and is also highly expressed in breast cancer cells. Mutations in this gene have been associated with WHIM (warts, hypogammaglobulinemia, infections, and myelokathexis) syndrome. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]

UniProt Comments for CXCR4	CXCR4: Receptor for the C-X-C chemokine CXCL12/SDF-1 that transduces a signal by increasing intracellular calcium ion levels and enhancing MAPK1/MAPK3 activation. Acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels. Involved in hematopoiesis and in cardiac ventricular septum formation. Also plays an essential role in vascularization of the gastrointestinal tract, probably by regulating vascular branching and/or remodeling processes in endothelial cells. Involved in cerebellar development. In the CNS, could mediate hippocampal-neuron survival. Acts as a coreceptor (CD4 being the primary receptor) for HIV-1 X4 isolates and as a primary receptor for some HIV-2 isolates. Promotes Env-mediated fusion of the virus. Monomer. Can form dimers. Interacts with CD164. Interacts with HIV-1 surface protein gp120 and Tat. Interacts with ARRB2; the interaction is dependent on the C-terminal phosphorylation of CXCR4 and allows activation of MAPK1 and MAPK3. Interacts with ARRC; the interaction is dependent on the C-terminal phosphorylation of CXCR4 and modulates calcium mobilization. Interacts (via the cytoplasmic C-terminal) with ITCH (via the WW domains I and II); the interaction, enhanced by CXCL12, ubiquitinates CXCR4 and leads to its degradation. Interacts with extracellular ubiquitin. Interacts with human cytomegalovirus/HHV- 5 protein UL78. Expressed in numerous tissues, such as peripheral blood leukocytes, spleen, thymus, spinal cord, heart, placenta, lung, liver, skeletal muscle, kidney, pancreas, cerebellum, cerebral cortex and medulla (in microglia as well as in astrocytes), brain microvascular, coronary artery and umbilical cord endothelial cells. Isoform 1 is predominant in all tissues tested. Belongs to the G-protein coupled receptor 1 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Membrane protein, multi-pass; GPCR, family 1; Receptor, GPCR Chromosomal Location of Human Ortholog: 2q21 Cellular Component: cell surface; lysosome; leading edge; early endosome; cytoplasmic membrane-bound vesicle; integral to membrane; intercellular junction; growth cone; cytoplasm; late endosome; plasma membrane; cytoplasmic vesicle; external side of plasma membrane Molecular Function: viral receptor activity; G-protein coupled receptor activity; protein binding; ubiquitin binding; ubiquitin protein ligase binding; cytokine binding; coreceptor activity; myosin light chain binding; actin binding; C-X-C chemokine receptor activity Biological Process: entry of virus into host cell; regulation of chemotaxis; viral reproduction; activation of MAPK activity; apoptosis; neuron migration; motor axon guidance; regulation of cell migration; germ cell development; T cell proliferation; elevation of cytosolic calcium ion concentration; germ cell migration; dendritic cell chemotaxis; positive regulation of oligodendrocyte differentiation; inflammatory response; neutrophil activation; response to virus; calcium-mediated signaling; patterning of blood vessels; G-protein coupled receptor protein signaling pathway; ameboidal cell migration; myelin maintenance; response to hypoxia; entry into host cell; brain development Disease: Whim Syndrome
Research Articles on CXCR4	**1.** CXCL12 and CXCR4 are related to formation of gastric tumors and lymph node metastasis
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