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CXCR4 Antibody(N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19500A

Product Information

Application	WB, E
Primary Accession	P61073
Other Accession	O08565, Q764M9, P70658, Q28474, P25930, NP_001008540.1
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat, Monkey, Pig, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41207
Calculated MW	39746
Antigen Region	50-79

Additional Information

Gene ID	7852
Other Names	C-X-C chemokine receptor type 4, CXC-R4, CXCR-4, FB22, Fusin, HM89, LCR1, Leukocyte-derived seven transmembrane domain receptor, LESTR, Lipopolysaccharide-associated protein 3, LAP-3, LPS-associated protein 3, NPYRL, Stromal cell-derived factor 1 receptor, SDF-1 receptor, CD184, CXCR4
Target/Specificity	This CXCR4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 50-79 amino acids from the N-terminal region of human CXCR4.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CXCR4 Antibody(N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CXCR4 {ECO:0000303|PubMed:9468539, ECO:0000312|HGNC:HGNC:2561}

Function	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 (PubMed:10074102, PubMed:10452968, PubMed:10644702, PubMed:10825158, PubMed:18799424, PubMed:20048153, PubMed:20505072, PubMed:24912431, PubMed:28978524, PubMed:8752280, PubMed:8752281). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as adenylate cyclase (PubMed:16725153, PubMed:17197449, PubMed:18799424, PubMed:39093700). CXCR4 is coupled to G(i) G alpha proteins and mediates inhibition of adenylate cyclase (PubMed:17197449, PubMed:39093700). Involved in the AKT signaling cascade (PubMed:24912431). Plays a role in regulation of cell migration, e.g. during wound healing (PubMed:28978524). Also acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels (PubMed:20228059). Binds bacterial lipopolysaccharide (LPS) et mediates LPS-induced inflammatory response, including TNF secretion by monocytes (PubMed:11276205). Involved in hematopoiesis and in cardiac ventricular septum formation (By similarity). Also plays an essential role in vascularization of the gastrointestinal tract, probably by regulating vascular branching and/or remodeling processes in endothelial cells (By similarity). Involved in cerebellar development; in the CNS, could mediate hippocampal-neuron surviva (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cell junction. Early endosome. Late endosome. Lysosome Note=In unstimulated cells, diffuse pattern on plasma membrane (PubMed:10452968, PubMed:14602072, PubMed:21540189). On agonist stimulation, colocalizes with ITCH at the plasma membrane where it becomes ubiquitinated (PubMed:14602072). In the presence of antigen, distributes to the immunological synapse forming at the T-cell-APC contact area, where it localizes at the peripheral and distal supramolecular activation cluster (SMAC) (PubMed:20215400)
Tissue Location	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

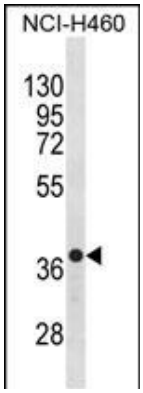
Background

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].

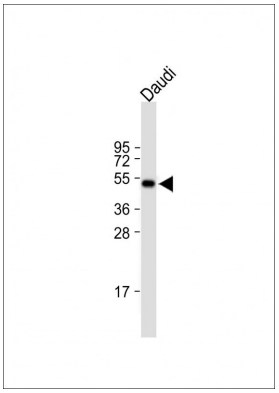
References

Hammad, M.M., et al. J. Biol. Chem. 285(45):34653-34664(2010)
Wang, A., et al. Arthritis Rheum. 62(11):3436-3446(2010)
Cheng, M., et al. Circ. Res. 107(9):1083-1093(2010)
Sanematsu, F., et al. Circ. Res. 107(9):1102-1105(2010)
O'Hayre, M., et al. PLoS ONE 5 (7), E11716 (2010) :

Images



CXCR4 Antibody (N-term) (Cat. #AP19500a) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the CXCR4 antibody detected the CXCR4 protein (arrow).



All lanes : Anti-CXCR4 Antibody(N-term) at 1:1000 dilution Lane 1: Daudi whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Observed band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Regulation of CXCR4-mediated invasion by DARPP-32 in gastric cancer cells.
- Migration ability and Toll-like receptor expression of human mesenchymal stem cells improves significantly after three-dimensional culture.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.