

CD184 (pS339) Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51641

Product Information

Application	WB, ICC, IHC-P
Primary Accession	P61073
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39746

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	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human CD184. The exact sequence is proprietary.
Dilution	WB~~1:500 ICC~~N/A IHC-P~~N/A
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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 survival (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

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.

References

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