

**CXCR4 Antibody (clone 12G5)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS12044****Specification**

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**CXCR4 Antibody (clone 12G5) - Product Information**

Application	IHC
Primary Accession	<a href="#">P61073</a>
Reactivity	Human, Monkey, Baboon
Host	Mouse
Clonality	Monoclonal
Calculated MW	40kDa KDa

**CXCR4 Antibody (clone 12G5) - 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

**Reconstitution & Storage**

+4°C, avoid freezing

**Precautions**

CXCR4 Antibody (clone 12G5) is for research use only and not for use in diagnostic or therapeutic procedures.

**CXCR4 Antibody (clone 12G5) - Protein Information****Name** CXCR4**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: [10452968](http://www.uniprot.org/citations/10452968), PubMed: [18799424](http://www.uniprot.org/citations/18799424), PubMed: [24912431](http://www.uniprot.org/citations/24912431), PubMed: [28978524](http://www.uniprot.org/citations/28978524)). Involved in the AKT signaling cascade (PubMed: [24912431](http://www.uniprot.org/citations/24912431)). Plays a role in regulation of cell migration, e.g. during wound healing (PubMed: [28978524](http://www.uniprot.org/citations/28978524)). Acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels (PubMed: [20228059](http://www.uniprot.org/citations/20228059)). Binds bacterial lipopolysaccharide (LPS) et mediates LPS-induced inflammatory response, including TNF

secretion by monocytes (PubMed:<a href="http://www.uniprot.org/citations/11276205" target="\_blank">11276205</a>). 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 (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. On agonist stimulation, colocalizes with ITCH at the plasma membrane where it becomes ubiquitinated. 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)

#### 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

#### Volume

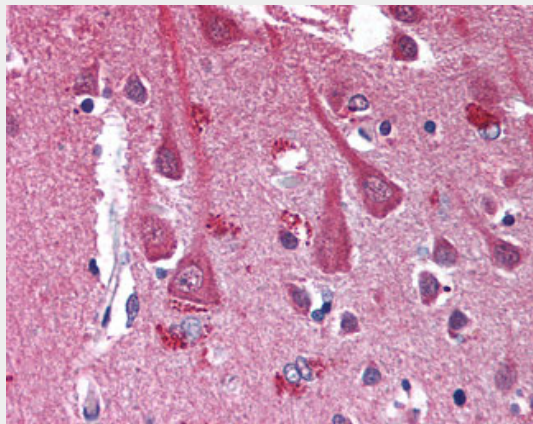
50 µl

#### CXCR4 Antibody (clone 12G5) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### CXCR4 Antibody (clone 12G5) - Images



Anti-CXCR4 antibody IHC of human brain, cortex.

#### CXCR4 Antibody (clone 12G5) - 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. Binds bacterial lipopolysaccharide (LPS) et mediates LPS-induced inflammatory response, including TNF secretion by monocytes.

#### **CXCR4 Antibody (clone 12G5) - References**

- Herzog H.,et al.DNA Cell Biol. 12:465-471(1993).  
Jazin E.E.,et al.Regul. Pept. 47:247-258(1993).  
Federspiel B.,et al.Genomics 16:707-712(1993).  
Loetscher M.,et al.J. Biol. Chem. 269:232-237(1994).  
Nomura H.,et al.Int. Immunol. 5:1239-1249(1993).