

**CXCR4 Blocking Peptide (N-term)**

Synthetic peptide

Catalog # BP21194a

**Specification**

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**CXCR4 Blocking Peptide (N-term) - Product Information**

Primary Accession

[P61073](#)**CXCR4 Blocking Peptide (N-term) - 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**

The synthetic peptide sequence is selected from aa 28-43 of HUMAN CXCR4

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**CXCR4 Blocking Peptide (N-term) - 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:<a href="http://www.uniprot.org/citations/10452968" target="\_blank">10452968</a>, PubMed:<a href="http://www.uniprot.org/citations/28978524" target="\_blank">28978524</a>, PubMed:<a href="http://www.uniprot.org/citations/18799424" target="\_blank">18799424</a>, PubMed:<a href="http://www.uniprot.org/citations/24912431" target="\_blank">24912431</a>). Involved in the AKT signaling cascade (PubMed:<a href="http://www.uniprot.org/citations/24912431" target="\_blank">24912431</a>). Plays a role in regulation of cell migration, e.g. during wound healing (PubMed:<a href="http://www.uniprot.org/citations/28978524" target="\_blank">28978524</a>). Acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels (PubMed:<a href="http://www.uniprot.org/citations/20228059" target="\_blank">20228059</a>). 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

### **CXCR4 Blocking Peptide (N-term) - Protocols**

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

- [Blocking Peptides](#)

### **CXCR4 Blocking Peptide (N-term) - Images**

### **CXCR4 Blocking Peptide (N-term) - 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 Blocking Peptide (N-term) - 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).