

**Anti-CXCR4 Antibody**  
Catalog # ABO10613**Specification****Anti-CXCR4 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P61073</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for C-X-C chemokine receptor type 4(CXCR4) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-CXCR4 Antibody - 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

**Calculated MW**

39746 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse<br>

**Subcellular Localization**

Cell membrane; Multi-pass membrane protein. Cell junction. Early endosome. Late endosome. Lysosome. 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 Specificity**

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. .

**Protein Name**

C-X-C chemokine receptor type 4(CXC-R4/CXCR-4)

### Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

### Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human CXCR4(18-33aa SGDYDSMKEPCFREEN), different from the related rat and mouse sequences by two amino acids.

### Purification

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins

### Storage

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

### Sequence Similarities

Belongs to the G-protein coupled receptor 1 family.

## Anti-CXCR4 Antibody - 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/18799424" target="\_blank">18799424</a>, PubMed:<a href="http://www.uniprot.org/citations/24912431" target="\_blank">24912431</a>, PubMed:<a href="http://www.uniprot.org/citations/28978524" target="\_blank">28978524</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 ITC1 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

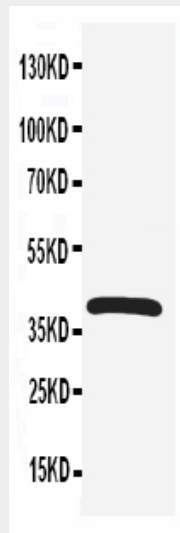
Expressed in numerous tissues, such as peripheral blood leukocytes, spleen, thymus, spinal cord, heart, placenta, lung, liver, skeletal muscle, kidney, pancreas, cerebellum, cerebral cortex and medulla (in microglia as well as in astrocytes), brain microvascular, coronary artery and umbilical cord endothelial cells Isoform 1 is predominant in all tissues tested

### Anti-CXCR4 Antibody - Protocols

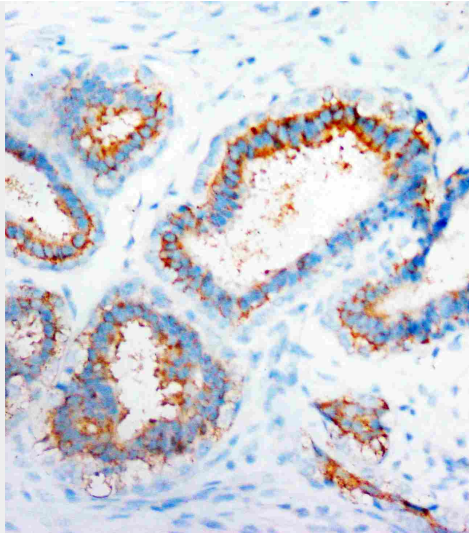
Provided below are standard protocols that you may find useful for product applications.

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

### Anti-CXCR4 Antibody - Images



Anti-CXCR4 antibody, ABO10613, Western blottingWB: HELA Cell Lysate



Anti-CXCR4 antibody, ABO10613, IHC(P)IHC(P): Human Mammary Cancer Tissue

### **Anti-CXCR4 Antibody - Background**

CXCR4 (Chemokine, CXC Motif, Receptor 4), also known as FUSIN or NPY3R, is a protein that in humans is encoded by the CXCR4 gene. It is the receptor for the CXC chemokine SDF1 that has essential functions on embryo organogenesis, immunological functions and T lymphocyte trafficking. CXCR4 is the only SDF1 receptor identified so far. This suggests that CXCR4 expression is critical for the biological effects of SDF1. CXCR4 is also a seven-transmembrane-spanning, G-protein-coupled receptor for the CXC chemokine PBSF/SDF-1. It functions as a co-receptor for T-cell-line tropic human immunodeficiency virus HIV-1. It was concluded that PBSF/SDF-1 and CXCR4 define a new signalling system for organ vascularization.