

CXCR7 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP8776b**Specification**

CXCR7 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P25106](#)**CXCR7 Antibody (C-term) Blocking Peptide - Additional Information**

Gene ID 57007

Other Names

Atypical chemokine receptor 3, C-X-C chemokine receptor type 7, CXC-R7, CXCR-7, Chemokine orphan receptor 1, G-protein coupled receptor 159, G-protein coupled receptor RDC1 homolog, RDC-1, ACKR3, CMKOR1, CXCR7, GPR159, RDC1

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8776b](/products/AP8776b) was selected from the C-term region of human CXCR7. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

CXCR7 Antibody (C-term) Blocking Peptide - Protein InformationName ACKR3 ([HGNC:23692](#))**Function**

Atypical chemokine receptor that controls chemokine levels and localization via high-affinity chemokine binding that is uncoupled from classic ligand-driven signal transduction cascades, resulting instead in chemokine sequestration, degradation, or transcytosis. Also known as interceptor (internalizing receptor) or chemokine-scavenging receptor or chemokine decoy receptor. Acts as a receptor for chemokines CXCL11 and CXCL12/SDF1 (PubMed: [16107333](http://www.uniprot.org/citations/16107333), PubMed: [19255243](http://www.uniprot.org/citations/19255243), PubMed: [19380869](http://www.uniprot.org/citations/19380869), PubMed: [20161793](http://www.uniprot.org/citations/20161793), PubMed: [22300987](http://www.uniprot.org/citations/22300987)). Chemokine

binding does not activate G-protein-mediated signal transduction but instead induces beta-arrestin recruitment, leading to ligand internalization and activation of MAPK signaling pathway (PubMed:16940167, PubMed:18653785, PubMed:20018651). Required for regulation of CXCR4 protein levels in migrating interneurons, thereby adapting their chemokine responsiveness (PubMed:16940167, PubMed:18653785). In glioma cells, transduces signals via MEK/ERK pathway, mediating resistance to apoptosis. Promotes cell growth and survival (PubMed:16940167, PubMed:20388803). Not involved in cell migration, adhesion or proliferation of normal hematopoietic progenitors but activated by CXCL11 in malignant hematopoietic cells, leading to phosphorylation of ERK1/2 (MAPK3/MAPK1) and enhanced cell adhesion and migration (PubMed:17804806, PubMed:18653785, PubMed:19641136, PubMed:20887389). Plays a regulatory role in CXCR4-mediated activation of cell surface integrins by CXCL12 (PubMed:18653785). Required for heart valve development (PubMed:17804806). Regulates axon guidance in the oculomotor system through the regulation of CXCL12 levels (PubMed:31211835).

Cellular Location

Cell membrane; Multi-pass membrane protein. Early endosome. Recycling endosome. Note=Predominantly localizes to endocytic vesicles, and upon stimulation by the ligand is internalized via clathrin-coated pits in a beta-arrestin-dependent manner. Once internalized, the ligand dissociates from the receptor, and is targeted to degradation while the receptor is recycled back to the cell membrane.

Tissue Location

Expressed in monocytes, basophils, B-cells, umbilical vein endothelial cells (HUVEC) and B-lymphoblastoid cells. Lower expression detected in CD4+ T-lymphocytes and natural killer cells. In the brain, detected in endothelial cells and capillaries, and in mature neurons of the frontal cortex and hippocampus. Expressed in tubular formation in the kidney. Highly expressed in astroglial tumor endothelial, microglial and glioma cells. Expressed at low levels in normal CD34+ progenitor cells, but at very high levels in several myeloid malignant cell lines. Expressed in breast carcinomas but not in normal breast tissue (at protein level).

CXCR7 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

CXCR7 Antibody (C-term) Blocking Peptide - Images

CXCR7 Antibody (C-term) Blocking Peptide - Background

CXCR7 is a member of the G-protein coupled receptor family. Although this protein was earlier thought to be a receptor for vasoactive intestinal peptide (VIP), it is now considered to be an orphan receptor, in that its endogenous ligand has not been identified. The protein is also a coreceptor for human immunodeficiency viruses (HIV).

CXCR7 Antibody (C-term) Blocking Peptide - References

Sreedharan,S.P., et.al., Proc. Natl. Acad. Sci. U.S.A. 88 (11), 4986-4990 (1991)