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CXCL12 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP13396b

Specification

CXCL12 Antibody (C-term) Blocking peptide - Product Information

Primary Accession P48061

CXCL12 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 6387

Other Names
Stromal cell-derived factor 1, SDF-1, hSDF-1, C-X-C motif chemokine 12, Intercrine reduced in hepatomas, IRH, hIRH, Pre-B cell growth-stimulating factor, PBSF, SDF-1-beta(3-72), SDF-1-alpha(3-67), CXCL12, SDF1, SDF1A, SDF1B

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13396b was selected from the C-term region of CXCL12. 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.

CXCL12 Antibody (C-term) Blocking peptide - Protein Information

Name CXCL12

Synonyms SDF1, SDF1A, SDF1B

Function
Chemoattractant active on T-lymphocytes and monocytes but not neutrophils. Activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis. SDF-1-beta(3-72) and SDF-1-alpha(3-67) show a reduced chemotactic activity. Binding to cell surface proteoglycans seems to inhibit formation of SDF-1-alpha(3-67) and thus to preserve activity on local sites. Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for SDF-1. Binds to the allosteric site (site 2) of integrins and activates integrins ITGAV:ITGB3, ITGA4:ITGB1 and ITGA5:ITGB1 in a CXCR4-independent manner (PubMed:29301984). Acts as a

positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase. Stimulates migration of monocytes and T- lymphocytes through its receptors, CXCR4 and ACKR3, and decreases monocyte adherence to surfaces coated with ICAM-1, a ligand for beta-2 integrins. SDF1A/CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase. Inhibits CXCR4-mediated infection by T-cell line-adapted HIV-1. Plays a protective role after myocardial infarction. Induces down-regulation and internalization of ACKR3 expressed in various cells. Has several critical functions during embryonic development; required for B-cell lymphopoiesis, myelopoiesis in bone marrow and heart ventricular septum formation. Stimulates the proliferation of bone marrow-derived B-cell progenitors in the presence of IL7 as well as growth of stromal cell- dependent pre-B-cells (By similarity).

Cellular Location
Secreted.

Tissue Location
Isoform Alpha and isoform Beta are ubiquitously expressed, with highest levels detected in liver, pancreas and spleen Isoform Gamma is mainly expressed in heart, with weak expression detected in several other tissues. Isoform Delta, isoform Epsilon and isoform Theta have highest expression levels in pancreas, with lower levels detected in heart, kidney, liver and spleen

CXCL12 Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

CXCL12 Antibody (C-term) Blocking peptide - Images

CXCL12 Antibody (C-term) Blocking peptide - Background

This gene encodes a stromal cell-derived alpha chemokinemember of the intercrine family. This gene product and its receptorCXCR4 can activate lymphocytes and have been implicated in themetastasis of some cancers such as breast cancer. Mutations in thisgene are associated with resistance to human immunodeficiency virustype 1 infections. Multiple transcript variants encoding differentisoforms have been found for this gene.

CXCL12 Antibody (C-term) Blocking peptide - References

Roder, C., et al. Childs Nerv Syst (2010) In press :Shimizu, Y., et al. Int J Immunopathol Pharmacol 23(2):449-461(2010)O'Hayre, M., et al. PLoS ONE 5 (7), E11716 (2010) :Levine, A.J., et al. Neurobehav HIV Med 1, 1-7 (2009) :Rehman, A.O., et al. Int J Oral Sci 1(3):105-118(2009)