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CXCL12 Antibody
Catalog # ASC11731

Specification

CXCL12 Antibody - Product Information

Application	**WB, ICC**
Primary Accession	P48061
Other Accession	NP_001171605, 296011023
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 15 kDa** **Observed: 18 kDa KDa**
Application Notes	**CXCL12 antibody can be used for detection of CXCL12 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunocytochemistry starting at 5 µg/mL.**

CXCL12 Antibody - Additional Information

Gene ID	**6387**

Target/Specificity
CXCL12; CXCL12 antibody is human and mouse reactive. Multiple isoforms of CXCL12 are known to exist.

Reconstitution & Storage
CXCL12 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
CXCL12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CXCL12 Antibody - 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:<a

href="http://www.uniprot.org/citations/29301984" target="_blank">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.

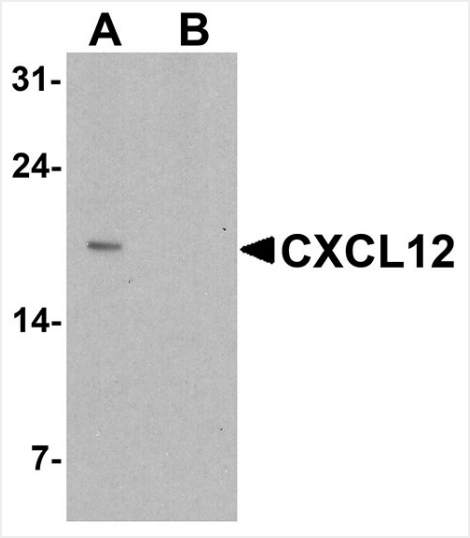
Tissue Location
Isoform Alpha and isoform Beta are ubiquitously expressed, with highest levels detected in liver, pancreas and spleen Isoform Gamma is mainly expressed in heart, with weak expression detected in several other tissues. Isoform Delta, isoform Epsilon and isoform Theta have highest expression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

CXCL12 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CXCL12 Antibody - Images



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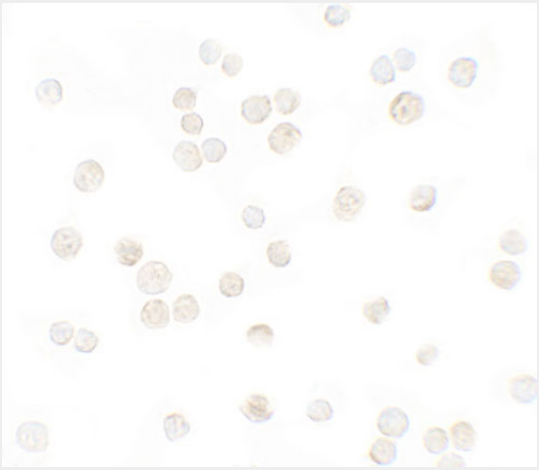
Western blot analysis of CXCL12 in HeLa cell lysate with CXCL12 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunocytochemistry of CXCL12 in HeLa cells with CXCL12 antibody at 5 µg/mL.

CXCL12 Antibody - Background

The CXCL12 protein, also known as SDF1, is a stromal cell-derived alpha chemokine member of the intercrine family. CXCL12 functions as the ligand for the G-protein coupled receptor, chemokine (C-X-C motif) receptor 4 (CXCR4) and CXCR7, and plays a role in many diverse cellular functions, including embryogenesis, immune surveillance, inflammation response, tissue homeostasis, and tumor growth and metastasis (reviewed in 1). Mutations in this gene are associated with resistance to human immunodeficiency virus type 1 infections (2).

CXCL12 Antibody - References

Timotijevic G, Mostarica Stojkovic M, and Miljkovic D. CXCL12: role in neuroinflammation. Int. J. Biochem. Cell Biol. 2012; 44:838-41.
Reiche EM, Ehara Watanabe MA, Bonametti AM, et al. The effect of stromal cell-derived factor 1 (SDF1/CXCL12) genetic polymorphism on HIV-1 disease progression. Int. J. Mol. Med. 2006; 18:785-93.