

# CXCL12 antibody - middle region

Rabbit Polyclonal Antibody

Catalog # AI16188

## Product Information

|                   |   |
|-------------------|---|
| Application       | WB  |
| Primary Accession | <a href="#">P48061</a>                                |
| Other Accession   | <a href="#">NM_000609</a> , <a href="#">NP_000600</a> |
| Reactivity        | Rat, Pig, Dog, Bovine                                 |
| Predicted         | Rat, Pig, Chicken, Dog, Bovine                        |
| Host              | Rabbit  |
| Clonality         | Polyclonal  |
| Calculated MW     | 10666   |

## Additional Information

|                          |  |
|--------------------------|--|
| Gene ID                  | 6387   |
| Alias Symbol             | IRH, PBSF, SDF1, TLSF, SDF1A, SDF1B, TPAR1, SCYB12   |
| Other Names              | Stromal cell-derived factor 1, SDF-1, hSDF-1, C-X-C motif chemokine 12, Interocrine 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 |
| Format                   | Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.  |
| Reconstitution & Storage | Add 50 ul of distilled water. Final anti-CXCL12 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.                                  |
| Precautions              | CXCL12 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.  |

## Protein Information

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|----------|--|
| Name     | CXCL12 {ECO:0000303 PubMed:16107333, ECO:0000312 HGNC:HGNC:10672}  |
| Function | Chemoattractant active on T-lymphocytes and monocytes but not neutrophils (PubMed: <a href="#">18802065</a> , PubMed: <a href="#">39093700</a> ). Activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis (PubMed: <a href="#">8752281</a> , PubMed: <a href="#">18802065</a> , PubMed: <a href="#">39093700</a> ). Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for CXCL12/SDF-1 (PubMed: <a href="#">16107333</a> , |

PubMed:[19255243](#)). Binds to the allosteric site (site 2) of integrins and activates integrins ITGA4: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 (PubMed:[18802065](#)). 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 (PubMed:[16107333](#), PubMed:[18802065](#), PubMed:[19255243](#), PubMed:[39093700](#)). CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase (PubMed:[18802065](#)). Inhibits CXCR4-mediated infection by T-cell line- adapted HIV-1 (PubMed:[8752281](#)). 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 (By similarity). 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

## Background

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Chemoattractant active on T-lymphocytes, 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. Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for SDF-1. 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. 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.

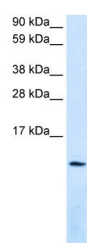
## References

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Shirozu M.,et al.Genomics 28:495-500(1995).  
 Yu L.,et al.Gene 374:174-179(2006).  
 Spotila L.D.,et al.Submitted (OCT-1994) to the EMBL/GenBank/DDBJ databases.  
 Begum N.A.,et al.Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.  
 Callebaut C.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

## Images

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µg/ml  
Positive Control: Human Lung

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.