

# CXCL12 Antibody

Purified Rabbit Polyclonal Antibody (Pab)  
Catalog # AP21399a

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P48061</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB52568
<b>Calculated MW</b>	10666

## Additional Information

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<b>Gene ID</b>	6387
<b>Other Names</b>	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
<b>Target/Specificity</b>	This CXCL12 antibody is generated from a rabbit immunized with a recombinant protein.
<b>Dilution</b>	WB~~1:2000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	CXCL12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CXCL12 {ECO:0000303   PubMed:16107333, ECO:0000312   HGNC:HGNC:10672}
<b>Function</b>	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:[8752281](#), PubMed:[18802065](#), PubMed:[39093700](#)). Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for CXCL12/SDF-1 (PubMed:[16107333](#), PubMed:[19255243](#)). Binds to the allosteric site (site 2) of integrins and activates integrins ITGA5: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.

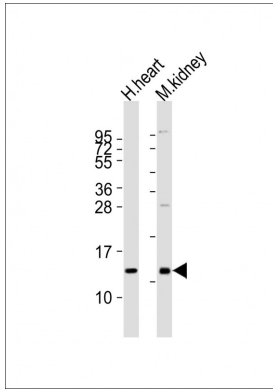
## References

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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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All lanes : Anti-CXCL12 Antibody at 1:2000 dilution Lane 1:  
human heart lysates Lane 2: mouse kidney lysates  
Lysates/proteins at 20 µg per lane. Secondary Goat  
Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000  
dilution Predicted band size : 11 kDa Blocking/Dilution  
buffer: 5% NFD/MTBST.

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