

**ARG54945**  
anti-CXCL12 / SDF1 antibodyPackage: 50 µg  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes CXCL12 / SDF1
Tested Reactivity	Hu, Ms
Tested Application	ELISA, ICC/IF, WB
Specificity	CXCL12 antibody is human and mouse reactive. Multiple isoforms of CXCL12 are known to exist.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CXCL12 / SDF1
Species	Human
Immunogen	Synthetic peptide (16 aa) within the last 50 aa of Human CXCL12 / SDF1.
Conjugation	Un-conjugated
Alternate Names	TPAR1; SDF1; C-X-C motif chemokine 12; Pre-B cell growth-stimulating factor; TLSF; PBSF; SDF-1; Intercrine reduced in hepatomas; IRH; hSDF-1; 3-72; SCYB12; hIRH; 3-67; Stromal cell-derived factor 1

### Application Instructions

Application table	Application	Dilution
	ELISA	Assay-dependent
	ICC/IF	5 µg/ml
	WB	1 - 2 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	HeLa Cell Lysate	

### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

**Note**

For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

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**Database links**

[GeneID: 20315 Mouse](#)

[GeneID: 6387 Human](#)

[Swiss-port # P40224 Mouse](#)

[Swiss-port # P48061 Human](#)

**Gene Symbol**

CXCL12

**Gene Full Name**

chemokine (C-X-C motif) ligand 12

**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. Mutations in this gene are associated with resistance to human immunodeficiency virus type 1 infections.

**Function**

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. [UniProt]

**Research Area**

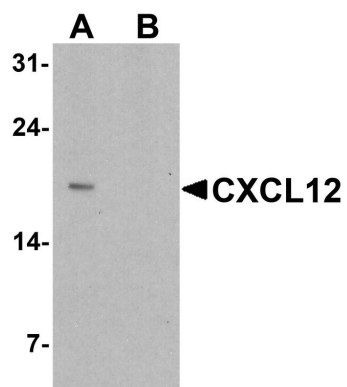
Cell Biology and Cellular Response antibody; Immune System antibody; Microbiology and Infectious Disease antibody

**Calculated Mw**

11 kDa

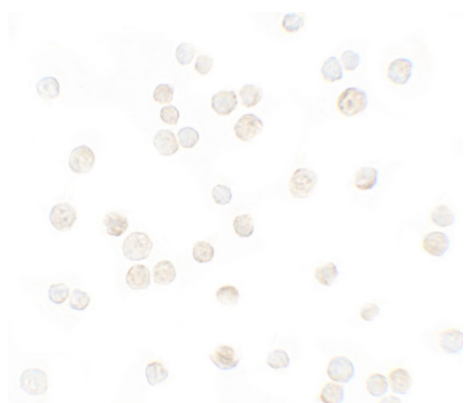
**PTM**

Processed forms SDF-1-beta(3-72) and SDF-1-alpha(3-67) are produced after secretion by proteolytic cleavage of isoforms Beta and Alpha, respectively. The N-terminal processing is probably achieved by DPP4. Isoform Alpha is first cleaved at the C-terminus to yield a SDF-1-alpha(1-67) intermediate before being processed at the N-terminus. The C-terminal processing of isoform Alpha is reduced by binding to heparin and, probably, cell surface proteoglycans.



ARG54945 anti-CXCL12 antibody WB image

Western blot: HeLa cell lysate stained with ARG54945 anti-CXCL12 antibody at 1  $\mu$ g/ml dilution in (A) the absence and (B) the presence of blocking peptide.



ARG54945 anti-CXCL12 antibody ICC/IF image

Immunocytochemistry: HeLa cells stained with ARG54945 anti-CXCL12 antibody at 5  $\mu$ g/ml dilution.