

SDF-1alpha Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10946**Specification**

SDF-1alpha Antibody - Product Information

Application	WB
Primary Accession	P48061
Other Accession	NP_001029058
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	10666

SDF-1alpha Antibody - Additional Information**Gene ID 6387**

Application & Usage	Western blot analysis (0.5-1 µg/ml). Based on researcher's feedback, it can also be used in immunofluorescence and neutralization (2-10 µg/ml). However, the optimal conditions should be determined individually.
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Other Names

SDF-1a, SDF 1a, SDF 1alpha, SDF 1 alpha, SDF -1, SDF, Stromal cell-derived factor 1;DF-1; C-X-C motif chemokine 12; Pre-B cell growth-stimulating factor; PBSF;SDF-1-alpha

Target/Specificity

SDF-1a

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit anti-human SDF-1α polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol and 0.01 thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

SDF-1alpha Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SDF-1alpha 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: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

SDF-1alpha 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 Cytometry](#)
- [Cell Culture](#)

SDF-1alpha Antibody - Images**SDF-1alpha Antibody - Background**

SDF-1 α (stromal cell-derived factor- α), also known as pre-B-cell growth-stimulating factor (PBSF), is a 70-amino acid CXC chemokine originally cloned from a bone marrow stromal cell line. Targeted deletion of SDF-1 gene resulted in defects of B-cell lymphopoiesis and bone marrow myelopoiesis. SDF-1 has been shown to be chemotactic for lymphocytes. In addition, SDF-1 was recently reported to be a ligand for CXCR4 (LESTR/fusin), a co-receptor for HIV-1 entry into T cells. SDF-1 binding to CXCR4 inhibits HIV-1 entry.