

Rabbit SDF 1 Polyclonal Antibody | anti-SDF-1 antibody

SDF 1 Antibody

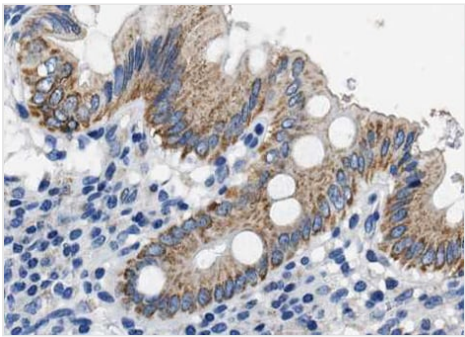
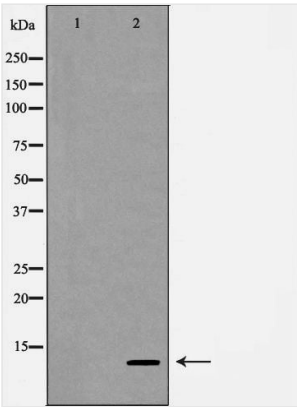
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321840	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

SDF 1; Polyclonal Antibody; SDF 1 Antibody; 12-O-tetradecanoylphorbol 13-acetate repressed protein 1; AI174028; C-X-C motif chemokine 12; Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1); Chemokine (C-X-C motif) ligand 12; Chemokine CXC motif ligand 12; cxcl12; hIRH; hSDF-1; Interchrine reduced in hepatomas; IRH; OTTHUMP00000019491; PBSF; Pre-B cell growth-stimulating factor; SCYB12; SDF-1-alpha(3-67); SDF-1a; SDF-1b; SDF1_HUMAN; SDF1A; SDF1B; Stromal cell-derived factor 1; Stromal cell-derived factor 1 delta; Stromal cell-derived factor 1 gamma; Stromal cell-derived factor 1a; Stromal cell-derived factor-1 alpha; Thymic lymphoma cell-stimulating factor; Tlsf; TLSF-a; TLSF-b; Tlsfa; Tlsfb; TPAR1; anti-SDF-1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	SDF 1 antibody detects endogenous levels of total SDF 1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	93
Applicable Applications for anti-SDF-1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human SDF 1
Subcellular Location	Secreted.
Tissue Specificity	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.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (86%), Horse (100%), Sheep (86%), Dog (100%), Chicken (100%), Xenopus (88%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA321840 at 1/100 staining human colon tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

WB (Western Blot)
Western blot analysis of SDF 1 expression in HepG2 cells, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-SDF-1 antibody

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 ITGA4:ITGB1, 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).

Subunit Structure: Monomer or homodimer; in equilibrium. Dimer formation is induced by non acidic pH and the presence of multivalent anions, and by binding to CXCR4 or heparin. Monomeric form is required for full chemotactic activity and resistance to ischemia/reperfusion injury, whereas the dimeric form acts as a partial agonist of CXCR4, stimulating Ca2+ mobilization but with no chemotactic activity and instead acts as a selective antagonist that blocks chemotaxis induced by the monomeric form. Interacts with the N-terminus of ACKR3. Interacts with integrin subunit ITGB3 (via the allosteric site (site 2)) (PubMed:29301984).

Post-translational Modifications: 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.

Similarity: Belongs to the intercrine alpha (chemokine Cx) family.

References	Wang C, Wang Q, Gao W, Zhang Z, Lou Y, Jin H, Chen X, Lei B, Xu H, Mao C; Journal: Acta Biomater. Highly efficient local delivery of endothelial progenitor cells significantly potentiates angiogenesis and full-thickness wound healing.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	10834988
NCBI GeneID	6387
NCBI Accession #	NP_000600.1

NCBI GenBank Nucleotide #	NM_000609.6
UniProt Accession #	P48061 ; Q2L985 ; Q2L986 ; Q2L988 ; Q5IT36 ; Q6ICW0 ; Q9H554 ; B2R4G0 ; E7EVL0 ; H7BYN8
Molecular Weight	Observed: 10 kDa Predicted: 11 kDa
NCBI Official Full Name	stromal cell-derived factor 1 isoform beta
NCBI Official Synonym Full Names	C-X-C motif chemokine ligand 12
NCBI Official Symbol	CXCL12
NCBI Official Synonym Symbols	IRH; PBSF; SDF1; TLSF; TPAR1; SCYB12
NCBI Protein Information	stromal cell-derived factor 1
UniProt Protein Name	Stromal cell-derived factor 1
UniProt Gene Name	CXCL12
UniProt Synonym Gene Names	SDF1; SDF1A; SDF1B; SDF-1; hSDF-1; IRH; hIRH; PBSF

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/sdf-1-antibody-immunohistochemistry-western-blot-elisa/321840>