SDF-1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	SDF-1, Polyclonal Antibody
Full Product Name	SDF-1 Polyclonal Antibody
Product Gene Name	anti-SDF-1 antibody
Product Synonym Names	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) [Cleaved into: SDF-1-beta(3-72); SDF-1-alpha(3-67)]
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Purity/Purification	The antibody was affinity-purified from rabbit serum by affinity-chromatography using specific immunogen.
Specificity	The antibody detects endogenous SDF-1
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.
Molecular Weight	10,666 Da
OMIM	600835
3D Structure	ModBase 3D Structure for P48061
Immunogen	Synthetic peptide from human protein at AA range: 31-80
Product Categories/Family for anti-SDF-1 antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-SDF-1 antibody	Immunohistochemistry (IHC)
Application Notes for anti-SDF-1 antibody	IHC: 1:50-300
Related Product Information for anti-SDF-1 antibody	MBS8595353 is an antibody targeting SDF-1. Also known as SDF-1 Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-SDF-1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SDF-1. It may not necessarily be applicable to this product.

NCBI GI #	76563933
NCBI GeneID	6387
NCBI Accession #	NP_001029058.1

UniProt Primary Accession #	P48061
UniProt Secondary Accession #	Q2L985; Q2L986; Q2L988; Q5IT36; Q6ICW0; Q9H554; B2R4G0; E7EVL0; H7BYN8
UniProt Related Accession #	P48061
GenBank Nucleotide #	NM_001033886.2
NCBI Official Full Name	stromal cell-derived factor 1 isoform gamma
NCBI Official Synonym Full Names	chemokine (C-X-C motif) ligand 12
NCBI Official Symbol	CXCL12
NCBI Official Synonym Symbols	IRH; PBSF; SDF1; TLSF; TPAR1; SCYB12
UniProt Protein Name	Stromal cell-derived factor 1
UniProt Synonym Protein Names	C-X-C motif chemokine 12; Intercrine reduced in hepatomas; IRH; hIRH; Pre-B cell growth-stimulating factor
Protein Family	Stromal cell-derived factor
UniProt Gene Name	CXCL12
UniProt Synonym Gene Names	SDF1; SDF1A; SDF1B; SDF-1; hSDF-1; IRH; hIRH; PBSF
UniProt Entry Name	SDF1_HUMAN
NCBI Protein Information	stromal cell-derived factor 1; intercrine reduced in hepatomas; pre-B cell growth-stimulating factor
NCBI Summary for SDF-1	This gene encodes a stromal cell-derived alpha chemokine member of the intercrine family. The encoded protein functions as the ligand for the G-protein coupled receptor, chemokine (C-X-C motif) receptor 4, 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. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2013]

UniProt Comments for SDF-1	CXCL12: 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 another C-X-C chemokine receptor CXCR7, 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 CXCR7, 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 CXCR7 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. 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 CXCR7. 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. Belongs to the intercrine alpha (chemokine CxC) family. 6 isoforms of the human protein are produced by alternative splicing. Protein type: Secreted; Cell development/differentiation; Motility/polarity/chemotaxis; Chemokine; Secreted, signal peptide Chromosomal Location of Human Ortholog: 10q11.1 Cellular Component: extracellular space; extracellular region; external side of plasma membrane Molecular Function: growth factor activity; chemokine receptor binding; chemokine activity; CXCR chemokine receptor binding; receptor binding Biological Process: response to peptide hormone stimulus; positive regulation of dopamine secretion; positive regulation of cell adhesion; adult locomotory behavior; blood circulation; neuron migration; motor axon guidance; chemotaxis; signal transduction; induction of positive chemotaxis; germ cell development; T cell proliferation; response to radiation; germ cell migration; cell adhesion; organ regeneration; regulation of actin polymerization and/or depolymerization; response to virus; patterning of blood vessels; cellular calcium ion homeostasis; G-protein coupled receptor protein signaling pathway; response to mechanical stimulus; response to heat; ameboidal cell migration; response to hypoxia; positive regulation of axon extension involved in axon guidance; immune response; positive regulation of endothelial cell proliferation; telencephalon cell migration Disease: Human Immunodeficiency Virus Type 1, Susceptibility To
Research Articles on SDF-1	**1.** The CXCL12-CXCR4 axis may influence the expression of VEGFR3 in urothelial bladder carcinoma and promote tumor recurrence.
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