Stromal Cell Derived Factor 1alpha (SDF1alpha) ELISA Kit for Fish

PRODUCT OVERVIEW

Product Name	Stromal Cell Derived Factor 1alpha (SDF1alpha), ELISA Kit
Full Product Name	Fish Stromal Cell Derived Factor 1alpha ELISA Kit
Product Gene Name	SDF1alpha elisa kit
Species Reactivity	Fish
Assay Type	Sandwich
Preparation and Storage	Store all reagents at 2-8 degree C
Molecular Weight	10,666 Da
OMIM	600835
3D Structure	ModBase 3D Structure for P48061
Related Product Information for SDF1alpha elisa kit	MBS036015 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Stromal Cell Derived Factor 1alpha (SDF1alpha) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing SDF1alpha. The ELISA analytical biochemical technique of the MBS036015 kit is based on SDF1alpha antibody-SDF1alpha antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect SDF1alpha antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, SDF1alpha. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of SDF1alpha elisa kit 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 SDF1alpha. 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
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 SDF1alpha	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 SDF1alpha	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: Motility/polarity/chemotaxis; Cell development/differentiation; Secreted; 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 activity; chemokine receptor binding; 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; signal transduction; chemotaxis; induction of positive chemotaxis; germ cell development; T cell proliferation; response to radiation; germ cell migration; cell adhesion; organ regeneration; response to virus; regulation of actin polymerization and/or depolymerization; cellular calcium ion homeostasis; patterning of blood vessels; G-protein coupled receptor protein signaling pathway; response to heat; response to mechanical stimulus; ameboidal cell migration; positive regulation of axon extension involved in axon guidance; response to hypoxia; positive regulation of endothelial cell proliferation; immune response; telencephalon cell migration Disease: Human Immunodeficiency Virus Type 1, Susceptibility To
Research Articles on SDF1alpha	**1.** The CXCL12-CXCR4 axis may influence the expression of VEGFR3 in urothelial bladder carcinoma and promote tumor recurrence.

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