

Active Recombinant Mouse Cxcl12 Protein (78 aa)

Cat. No. Cxcl12-207C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse SDF-1 β /CXCL12 produced in CHO cells is a polypeptide chain containing 78 amino acids. A fully biologically active molecule, rm SDF-1 β /CXCL12 has a molecular mass of 8.5 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Species	Mouse
Source	CHO
ProteinLength	78
Description	SDF-1 α and SDF-1 β, members of the chemokine α subfamily that lack the ELR domain, were initially identified using the signal sequence trap cloning strategy from a mouse bone-marrow stromal cell line. SDF-1 α and SDF-1 β cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1 α and SDF-1 β are encoded by a single gene and arise by alternative splicing. The two proteins are identical except for the four amino acid residues that are present in the carboxy-terminus of SDF-1 β and absent from SDF-1 α. SDF-1/PBSF is highly conserved between species, with only one amino acid substitution between the mature human and mouse proteins. SDF-1/PBSF acts via the chemokine receptor CXCR4 and has been shown to be a chemoattractant for T-lymphocytes, monocytes, pro- and pre-B cells, but not neutrophils. Mice lacking SDF-1 or CXCR4 have been found to have impaired B-lymphopoiesis, myelopoiesis, vascular development, cardiogenesis and abnormal neuronal cell migration and patterning in the central

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	nervous system.
Form	Sterile Filtered White lyophilized (freeze-dried) powder.
Bio-activity	The EC50 value of mouse SDF-1/CXCL12 on Ca ²⁺ mobilization assay in CHO-K1/Gα15/mCXCR4 cells (human Gα15 and mCXCR4 stably expressed in CHO-K1 cells) is less than 2.5 µg/mL.
Molecular Mass	8.5 kDa, observed by reducing SDS-PAGE.
AA Sequence	KPVSLSYRCPCRFFESHIANVKHLKILNTPNCALQIVARLKNNNRQVCIDPKLKWI QEYLEKALNKRLKM
Endotoxin	< 0.2 EU/µg, determined by LAL method.
Purity	> 95% as analyzed by SDS-PAGE.
Storage	Lyophilized recombinant Mouse SDF-1 β/CXCL12 remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, Mouse SDF-1β/CXCL12 should be stable up to 1 week at 4 centigrade or up to 3 months at -20 centigrade.
Storage Buffer	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH2O or PBS at 100 µg/mL.

GENE INFORMATION

Gene Name	Cxcl12 chemokine (C-X-C motif) ligand 12 [Mus musculus]
Official Symbol	Cxcl12

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Synonyms	CXCL12; chemokine (C-X-C motif) ligand 12; stromal cell-derived factor 1; C-X-C motif chemokine 12; pre-B cell growth-stimulating factor; pre-B-cell growth-stimulating factor; thymic lymphoma cell-stimulating factor; 12-O-tetradecanoylphorbol 13-acetate repressed protein 1; Pbsf; Sdf1; Tlsf; Sdf1a; Sdf1b; Tlsfa; Tlsfb; Tpar1; Scyb12; AI174028;
Gene ID	20315
mRNA Refseq	NM_001012477
Protein Refseq	NP_001012495
UniProt ID	P40224