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Cxcl12
Recombinant Mouse SDF-1 beta / CXCL12

Catalog No.	CRS003A	**Quantity:**	2 µg
	CRS003B		10 µg
	CRS003C		1.0 mg

Alternate Names: Stromal cell-derived factor 1, TPAR1, C-X-C motif chemokine 12, Pre-B cell growth-stimulating factor, PBSF, Thymic lymphoma cell-stimulating factor, TLSF

Description: SDF-1alpha and SDF-1beta (CXCL12), are 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. These proteins were subsequently also cloned from a human stromal cell line as cytokines that supported the proliferation of a stromal cell-dependent pre-B-cell line. SDF-1alpha and SDF-1beta cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1alpha and SDF-1beta 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-1beta and absent from SDF-1alpha. 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 nervous system.

UniProt ID: P40224-2

Gene ID: 20315

Source: *E. coli*

Molecular Weight: 8.5 kDa (72 aa) Monomer

Formulation: Lyophilized from sterile-filtered aqueous solution containing 0.1% TFA.

Purity: ≥ 95% by SDS-PAGE, reducing and non-reducing
Under non-reducing conditions, samples prepared at higher working concentrations are shown to produce a band of approximately 16 kDa on an SDS PAGE gel, which may represent dimer formation.

Endotoxin Level: ≤ 1 EU/µg determined by kinetic LAL analysis

Amino Acid Sequence: KPVSLSYRCP CRFFESHIAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNKRL KM

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water or aqueous buffer to a concentration of 0.1-1.0 mg/mL. Further dilutions should be made in appropriate buffered solutions.

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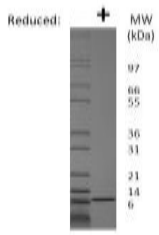
Storage & Stability: Store as supplied at -20°C to -80°C for up to 1 year. Upon reconstitution, store at 2-8°C for up to 1 month or prepare working aliquots and store at -20°C to -80°C for up to 3 months. It is recommended that a carrier protein such as 0.1% HSA or BSA is added for long term storage. **Avoid repeated freeze-thaw cycles.**



Mouse SDF-1 beta / CXCL12 Gel
Figure: 1 ug run under (+) reducing conditions in a 4-20% Tris-Glycine gel, stained with Coomassie Blue. Mouse SDF-1 beta / CXCL12 is predicted to have a MW of 8.5 kDa.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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