Overview

Synonyms	SDF-1 beta/CXCL12, Mouse;
Description	SDF-1ª and SDF-1ß, members of the chemokine ª 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-1ª and SDF-1ß cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1ª and SDF-1ß 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-1ß and absent from SDF-1ª. 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 .
Species	Mouse
Source	*E. coli*
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human peripheral blood monocytes is in a concentration range of 50-100 ng/ml.
Sequence	KPVSLSYRCP CRFFESHIAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNKRL KM

Properties

Measured Molecular Weight	Approximately 8.5 kDa, a single non-glycosylated polypeptide chain containing 72 amino acids.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at d -20 °C. Further dilutions should be made in appropriate buffered solutions.
Endotoxin Level	Less than 1 EU/µg of rMuSDF-1² /CXCL12² as determined by LAL method.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Usage	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
Storage	This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. **Avoid repeated freeze/thaw cycles.**

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura,
Delhi – 110034 (INDIA).
Mobile: +91-9810521400, Ph: +91-11-42208000
Email: customerservice@lifetechindia.com
Web: www.lifetechindia.com