

Product Datasheet

Recombinant Murine SDF-1 beta (rMuSDF-1 beta/CXCL12) (orb1495007)

Catalog Number	orb1495007
Category	Proteins
Description	<p>SDF-1α and SDF-1β, 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-1α and SDF-1β cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1α and SDF-1β 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-1β and absent from SDF-1α. 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 .</p>
Form/Appearance	Lyophilized from a 0.2mm filtered concentrated solution in 20mM PB, pH 7.4, 150mM NaCl.
Buffer/Preservatives	Lyophilized from a 0.2mm filtered concentrated solution in 20mM PB, pH 7.4, 150mM NaCl.
Purity	>97% by SDS-PAGE and HPLC analyses.
Purification	>97% by SDS-PAGE and HPLC analyses.
Protein Sequence	KPVLSYRCP CRFFESHIAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNKRL KM

Biorbyt Ltd.

7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom

Email: info@biorbyt.com, support@biorbyt.com

Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

Biorbyt LLC

68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713-2847
United States

Email: info@biorbyt.com, support@biorbyt.com

Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

MW	8.5 kDa, a single non-glycosylated polypeptide chain containing 72 amino acids.
Application notes	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 -20°C. Further dilutions should be made in appropriate buffered solutions.
Endotoxins	Less than 1EU/mg of rMu SDF-1 beta /CXCL12 as determined by LAL method.
Source	Escherichia coli.
Biological Activity	Fully biologically active when compared to standard. Determined by its ability to chemoattract human monocytes using a concentration range of 50.0-100.0 ng/ml, corresponding to a Specific Activity of $\approx 1 \times 10^4$ IU/mg.
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.
Note	For research use only
Expiration Date	6 months from date of receipt.

Biorbyt Ltd.

7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom

Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\)1223 859353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)

Biorbyt LLC

68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713-2847
United States

Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+1(415)906-5211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)651-8558)