

Product Datasheet

Recombinant Rat SDF-1 alpha (rRtSDF-1a/CXCL12) (orb1494998)

Catalog Number	orb1494998
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.</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 CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKSNNRQVCIDPKLKWIQE YLDKALNK
MW	7.9 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.

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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 rRtSDF-1a/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 peripheral blood 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.

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