



Technical Data Sheet

Recombinant Human SDF-1 alpha (rHu SDF-1 alpha/CXCL12-alpha)

Human SDF-1 alpha (CXCL12)

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. 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-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.

Catalog Number:	RC312-23A
Source:	<i>Escherichia coli</i> .
Molecular Weight:	8.0 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.
Quantity:	2 μ g/10 μ g/1mg
Purity:	>97% by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. Determined by its ability to chemoattract human peripheral T cells activated with PHA and IL-2 using a concentration range of 20.0-80.0 ng/ml.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μ m filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 130mM NaCl.
AA Sequence:	KPVSLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNK
Endotoxin:	Less than 1EU/ μ g of rHuSDF-1 alpha as determined by LAL method.
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 \leq -20°C. Further dilutions should be made in appropriate buffered solutions.



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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.**

Usage:

This material is offered by Bio Basic Inc. for research, laboratory or further evaluation purposes. **NOT FOR HUMAN USE.**