

PRODUCT DATA SHEET



Bioworld Technology, Inc.

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

Catalog Number: PR1112

Source: Escherichia coli.

Quantity: 2µg/10µg/1.0mg

Description

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.

Molecular Weight:

8.0 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.

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, corresponding to a Specific Activity of $\square 1.25 \times 10^4$ IU/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2µm filtered concentrated solution in 20mM PB, pH 130mM NaCl.

AA Sequence:

K P V S L S Y R C P C R F F E S H V A R A N V K H L K
I L N T P N C A L Q I V A R L K N N N R Q V C I D P K
L K W I Q E Y L E K A L N K

Endotoxin:

Less than 1EU/µg 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 $\leq -20^\circ\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage:

This lyophilized preparation is stable at 2-8 $\square\text{C}$, but should be kept at -20 $\square\text{C}$ for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 $\square\text{C}$. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 $\square\text{C}$ to -70 $\square\text{C}$. Avoid repeated freeze/thaw cycles.

Usage:

This material is offered by USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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