

PRODUCT DATA SHEET



Bioworld Technology, Inc.

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

Catalog Number: PR3012

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:

7.9 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 blood monocytes using a concentration range of 50.0-100.0 ng/ml, corresponding to a Specific Activity of \square x 10⁴ IU/mg.

Physical Appearance:

Sterile Filtered White Lyophilized (freeze-dried) powder.

Formulation:

Lyophilized from a 0.2mm filtered concentrated solution in 20mM PB, pH 7.4, 150mM 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 S N N R Q V C I D P K L
K W I Q E Y L D K A L N K

Endotoxin:

Less than 1EU/mg of rRtSDF-1a/CXCL12 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 <-20°C. Further dilutions should be made in appropriate buffered solutions.

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 USA Bioworld biotech for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE. Made in China

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