

Technical Data Sheet

Flogen[®] Recombinant Rat SDF-1 α /CXCL12

(rRtSDF-1 α /CXCL12)

Catalog Number:	PGR0241-012A
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 7.9 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.
Quantity:	2 μ g/10 μ g/1mg
AA Sequence:	KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKSNNRQVC IDPKLKWIQE YLDKALNK
Purity:	>97% by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED ₅₀ determined by a chemotaxis bioassay using human peripheral blood monocytes is less than 100 ng/ml, corresponding to a specific activity of > 1.0 \times 10 ⁴ IU/mg.
Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μ m filtered concentrated solution in 20mM PB, pH 7.4, 150mM NaCl.
Endotoxin:	Less than 1EU/ μ g of rRtSDF-1 α /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 \leq -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:	For research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.

Rat SDF-1 α /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.