

## Recombinant Rat Stromal-Cell Derived Factor-1 beta/CXCL12 beta (Rat SDF-1 $\beta$ /CXCL12 $\beta$ )

### Product Information

Product Name	Cat#	Size
Recombinant Rat Stromal-Cell Derived Factor-1 beta/CXCL12 beta (Rat SDF-1 $\beta$ /CXCL12 $\beta$ )	90942ES10	10 $\mu$ g
	90942ES60	100 $\mu$ g
	90942ES76	500 $\mu$ g

### Product Description

CXCL12, also known as SCYB12, PBSF and SDF-1 beta, is an 8.3 kDa, heparin-binding member of the CXC (or alpha-) family of chemokines. SDF-1 is highly conserved between species, mouse CXCL12 $\beta$  shares approximately 92 % amino acid sequence identity with human CXCL12 $\beta$ . In all SDF-1 isoforms, SDF-1 $\beta$  is the canonical sequence. It has the complete amino acids in the C-terminal tail. On the cell surface, the receptor for this chemokine is CXCR4 and syndecan4. CXCL12 is strongly chemotactic for T-lymphocytes, monocytes, but not neutrophils. Although alpha and beta isoforms show similar activity, SDF-1 alpha is differentially processed, and different cells secrete the two isoforms. SDF-1 alpha and beta are reported to be monomers at neutral pH and physiologic ionic strength.

### Product Properties

<b>Synonyms</b>	CXCL12/SDF-1 beta, TPAR1, PBSF, TLSF
<b>Accession</b>	Q9QZD1
<b>GeneID</b>	24772
<b>Source</b>	E.coli-derived rat SDF-1 $\beta$ /CXCL12 $\beta$ protein, Lys22-Met93.
<b>Molecular Weight</b>	Approximately 8.4 kDa.
<b>AA Sequence</b>	KPVSLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKSNNRQVC IDPKLKWIQE YLDKALNKRL KM
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	>97% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The biological activity determined by a chemotaxis bioassay using human peripheral blood monocytes is in a concentration range of 100-200 ng/mL. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 1.0 EU per 1 $\mu$ g of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	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 $^{\circ}$ C. Further dilutions should be made in appropriate buffered solutions.

### Shipping and Storage

The products are shipped with ice pack and can be stored at -20 $^{\circ}$ C to -80 $^{\circ}$ C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!