

Recombinant Human Stromal-Cell Derived Factor-1 beta/CXCL12 beta (Human SDF-1 β /CXCL12 β)

Product Information

Product Name	Cat#	Size
Recombinant Human Stromal-Cell Derived Factor-1 beta/CXCL12 beta (Human SDF-1 β /CXCL12 β)	90915ES05	2 μ g
	90915ES10	10 μ g
	90915ES50	50 μ g
	90915ES60	100 μ g
	90915ES76	500 μ g

Product Description

CXCL12, also known as SDF-1, is a heparin-binding member of the CXC (or alpha-) family of chemokines. SDF-1 alpha and SDF-1 beta are the first cytokines 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. CXCL12 β is synthesized as a 93 amino acid (aa) precursor that contains a 21 aa signal sequence and a 72 aa mature region. The mature molecule exhibits a typical three antiparallel beta -strand chemokine-like fold. There are no potential N-linked glycosylation sites. The C-terminus is likely associated with heparin binding. SDF-1 beta circulates and undergoes proteolytic processing. CD26 will remove the first two N-terminal amino acids, possibly creating a reduced-activity chemokine. On the cell surface, the receptor for this chemokine is CXCR4 and syndecan4. Among its many functions, CXCL12 is known to influence lymphopoiesis, regulate patterning and cell number of neural progenitors, and promote angiogenesis. It also enhances the survival of myeloid progenitor cells.

Product Properties

Synonyms	hSDF-1 beta, IRH, hIRH, PBSF
Accession	P48061
GeneID	6387
Source	E.coli-derived Human SDF-1 β /CXCL12 β , Lys22-Met93.
Molecular Weight	Approximately 8.5 kDa.
AA Sequence	KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNKRF KM
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE and HPLC analyses.
Biological Activity	The biological activity determined by a chemotaxis bioassay using PHA and rHuIL-2 activated human peripheral blood T-lymphocytes is in a concentration range of 20-80 ng/mL. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1 μ g of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	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.



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Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°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.