

SDF1A

Recombinant Human Stromal Cell-Derived Factor 1 alpha

Catalog No.	CRS000A CRS000B CRS000C	Quantity:	2 µg 10 µg 1.0 mg
Alternate Names:	SDF-1 alpha, CXCL12, PBSF, SCYB12, SDF1-a, SDFA1, TPAR1, TLSF-a		
Gene ID:	6387		
Protein Accession No:	NP_954637		
Description:	<p>SDF-1α and SDF-1β, 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-1α and SDF-1β cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1α and SDF-1β 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-1β and absent from SDF-1α. 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.</p> <p>Recombinant Human SDF-1 alpha is a non-glycosylated polypeptide chain containing 68 amino acids.</p>		
Source:	<i>E. coli</i>		
Molecular Weight:	8.0 kDa		
Formulation:	Lyophilized from a 0.2 µm filtered concentrated (1.0mg/mL) solution in 20 mM PB, pH 7.0 + 130 mM NaCl.		
Purity:	>97.0% by RP-HPLC and SDS-PAGE		
Endotoxin Level:	<0.1 ng/µg SDF1-alpha		
Biological Activity:	The specific activity was determined by its ability to chemoattract human peripheral T-cells activated with PHA and IL2 using a concentration of 20.0-80.0 ng/ml.		
Amino Acid Sequence:	KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNK		
Reconstitution:	<p>Centrifuge vial prior to opening. Add sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Please note that the addition of any carrier protein into this product may produce unwanted endotoxin. This depends upon the particular application employed. Further dilutions should be made in appropriate buffered solutions.</p>		
Storage & Stability:	<p>Stable at 2-8°C, but best kept desiccated -20°C. Upon reconstitution, stable for up to 1 week at 2-8°C. For longer term, store in working aliquots below -20°C. Avoid repeated freeze/thaw cycles.</p>		

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