



***Recombinant Human SDF-1 $\alpha$  / CXCL12***  
*(Stromal Cell-Derived Factor-1 alpha)*

*Catalog Number: 100-20*

*Accession Number: P48061-2*

***Specifications and Uses:***

**Alternate Names:** CXCL12, PBSF

**Description:**

Stromal cell Derived Factor-1 alpha (SDF-1 $\alpha$ ), also called CXCL12, is one of two splice variants made by a wide variety of cells when stimulated by inflammatory cytokines such as, TNF, IL-1 or LPS. SDF-1 $\alpha$  signals through the G protein-coupled receptor, CXCR4, to recruit activated leukocytes. Human and mouse SDF-1 $\alpha$  share 99% sequence identity. Recombinant human SDF-1 $\alpha$  is a non-glycosylated protein, containing 68 amino acids, with a molecular weight of 8 kDa.

**Source:** *E.coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation and Stability:**

Recombinant human SDF-1 $\alpha$  is lyophilized with no additives.

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/mL, which can be further diluted into other aqueous solutions.

**Protein Content and Purity (typically  $\geq$  98%) determined by:**

HPLC, Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm

**Endotoxin Level:**

Measured by kinetic LAL analysis and is typically  $\leq$  1 EU/ $\mu$ g protein.

**Biological Activity:**

The activity is determined by its ability to chemoattract human peripheral T cells at 10 - 75 ng/mL.

**AA Sequence:**

KPVLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE YLEKALNK

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**

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