



# Synthelis®

## Ligand

Protein Catalog

**SDF1a - Stromal cell-derived factor 1**

**# S069**

### Product specification

**Acronym:** SDF-1 $\alpha$

**Synonyms:** CXCL12

**Origin species :** Human

**Protein reference :** P48061 (UniProtKB)

NP\_000600.1 (GenBank)

**Family:** Ligand

**Expression system:** E.coli based CFPS

**Format:** Soluble

**Protein sequence:** Lys22 – Met93

**Tag :** 6xHis tag (N-ter)

**Cleavage site:** Factor Xa

**Product MW:** 10.7 kDa

**Application:** Drug screening & discovery, antibody development, structural biology

### Product description

SDF-1 $\alpha$  is a chemoattractant active on T-lymphocytes, monocytes, but not neutrophils. SDF-1  $\alpha$  activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis. Also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for SDF-1. SDF-1 $\alpha$  acts as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase. SDF-1 $\alpha$  stimulates migration of monocytes and T-lymphocytes through its receptors, CXCR4 and ACKR3, and decreases monocyte adherence to surfaces coated with ICAM-1, a ligand for beta-2 integrins. SDF1A/CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase.

### Recombinant protein sequence

**His tag – factor X cleavage site –**

KPVSLSYRCPCRFFESHVARANVKHLKILNTPNCALQIVARLKNNNRQVCIDPKLKWIQEYLEKALNK

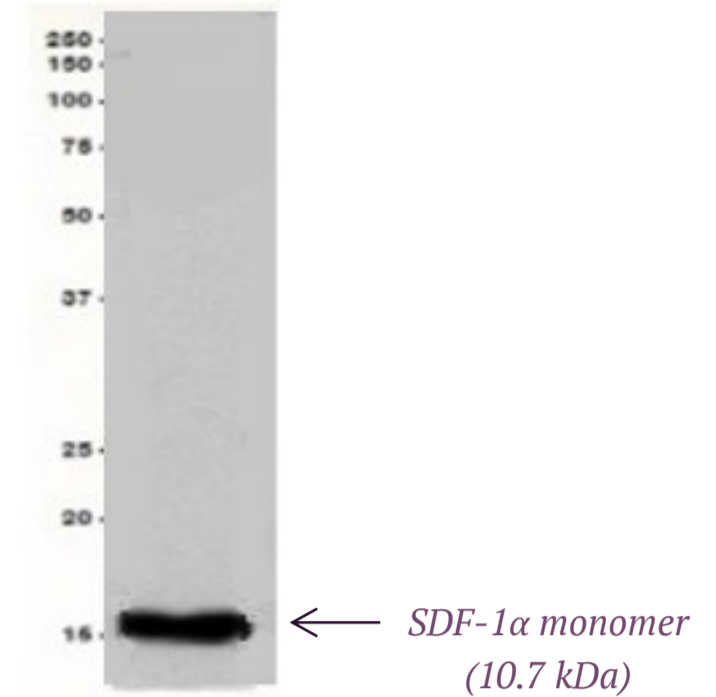


## Quality analysis

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**Purity:** > 98% (determined by Coomassie Blue stained SDS-PAGE)

**Purification procedure:** N-protein was purified on a nickel-nitrilotriacetic acid (Ni-NTA) resin. Further purification steps can be performed if required.



**Fig.1:** Identification of purified SDF-1 $\alpha$  by Western Blot using an anti-6xHis antibody

## Formulation

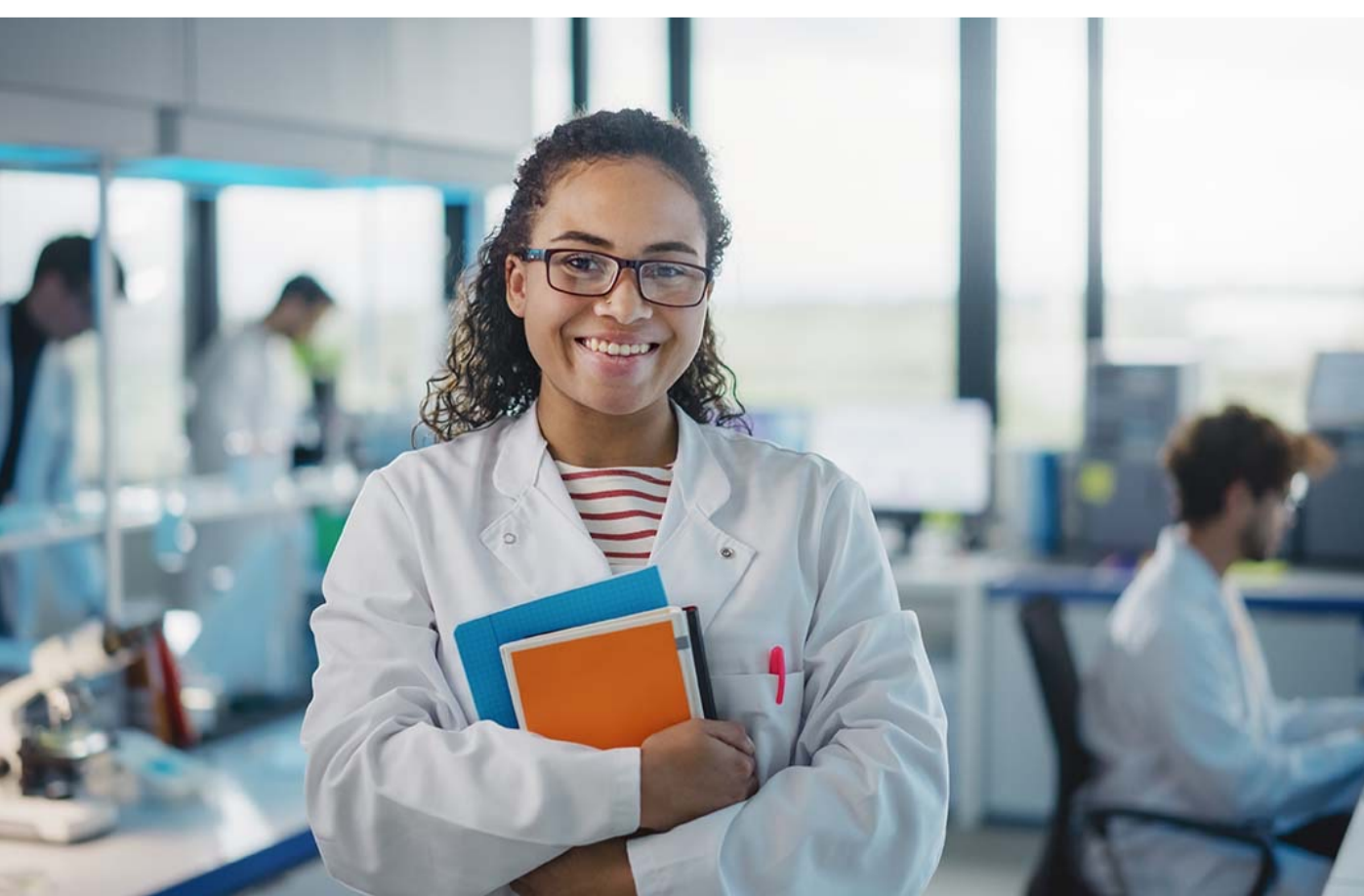
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**Buffer:** Available in Tris 50mM, pH 7.5. Other buffers or customized formulation can be provided upon request.

**Storage/Stability:** Store at +4°C for up to one week or several months at -80°C. Aliquot for storage.  
Do not freeze-thaw after aliquoting.

**Use restrictions:** For life science research use only.

**Available sizes:** 10  $\mu$ g, 50  $\mu$ g, 100  $\mu$ g, customized quantity on request.



Need a specific amount, a quote or any additional information?  
Contact-us



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