

**Synonym**

SDF-1, CXCL12, hSDF-1, IRH, hIRH, PBSF, SDF1, SDF1A, SDF1B

Source

Human SDF-1, His Tag (SD1-H5143) is expressed from *E. coli* cells. It contains AA Lys 22 - Lys 89 (Accession # [P48061-2](#)).

Predicted N-terminus: Met

Molecular Characterization

Poly-his	SDF-1(Lys 22 - Lys 89) P48061-2
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This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 10.0 kDa. The protein migrates as 13 kDa under reducing (R) condition (SDS-PAGE).

Endotoxin

Less than 1.0 EU per μ g by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

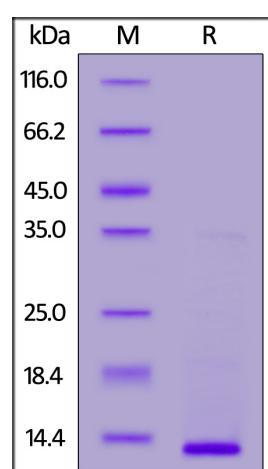
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

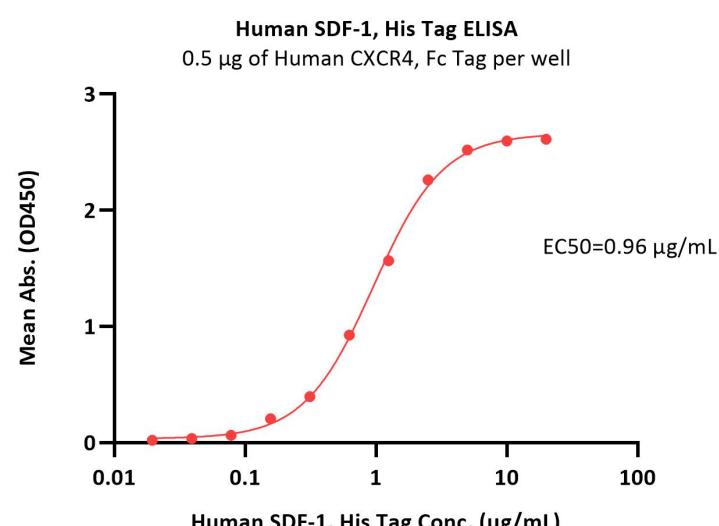
Human SDF-1, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA

Discounts, Gifts,
and more!

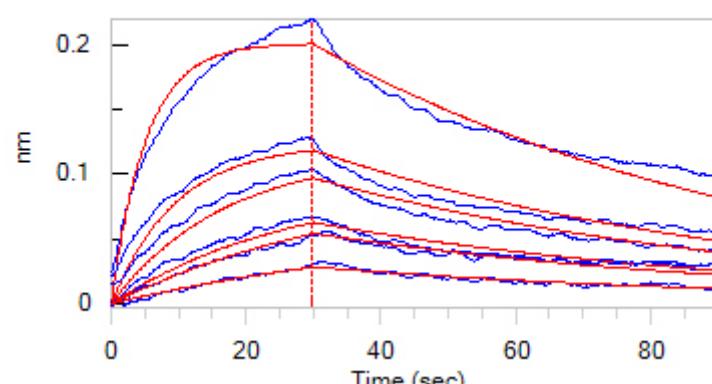


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Immobilized Human CXCR4, Fc Tag (Cat. No. CX4-H5269) at 5 µg/mL (100 µL/well) can bind Human SDF-1, His Tag (Cat. No. SD1-H5143) with a linear range of 0.02-2.5 µg/mL (QC tested).

Bioactivity-BLI



Loaded Human SDF-1, His Tag (Cat. No. SD1-H5143) on NTA Biosensor, can bind Human CXCR4, Fc Tag (Cat. No. CX4-H5269) with an affinity constant of 41.7 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Acts as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase. 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. Inhibits CXCR4-mediated infection by T-cell line-adapted HIV-1. Plays a protective role after myocardial infarction. Induces down-regulation and internalization of ACKR3 expressed in various cells. Has several critical functions during embryonic development; required for B-cell lymphopoiesis, myelopoiesis in bone marrow and heart ventricular septum formation. Stimulates the proliferation of bone marrow-derived B-cell progenitors in the presence of IL7 as well as growth of stromal cell-dependent pre-B-cells

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