Recombinant Human CXCL12/SDF-1 Protein

Catalog No.: RP01637

Sequence Information

Species
Human

Gene ID
6387

Swiss Prot
P48061-2

Tags
NO-tag

Synonyms
IRH; PBSF; SDF1; TLSF; TPAR1; SCYB12;CXCL12

Product Information

Source
Pichia

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
7.96 kDa

Observed MW
12 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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 (By similarity).

Basic Information

Description
Recombinant Human CXCL12/SDF-1 Protein is produced by *Pichia* expression system. The target protein is expressed with sequence (Lys22-Lys89) of human CXCL12/SDF-1 (Accession #NP_954637.1.) fused with no additional amino acid.

Activity
Measured by its ability to chemoattract MOLT4 cells. The ED_{50} for this effect is 11.47-45.86 ng/mL, corresponding to a specific activity of 2.18×10^4 ~8.72×10^4 units/mg.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

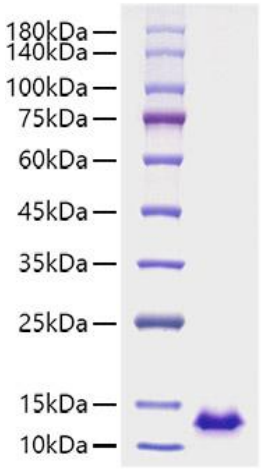
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

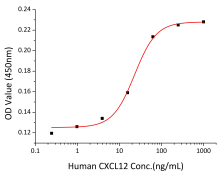
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Validation Data



Recombinant Human CXCL12/SDF-1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Human CXCL12/SDF-1 Protein chemoattract MOLT4 cells. The ED_{50} for this effect is 11.47-45.86 ng/mL, corresponding to a specific activity of 2.18×10^4 ~8.72×10^4 units/mg.