

Human CXCL12 / SDF-1 Protein (isoform a, His Tag)

Catalog Number: 13511-H07E



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CXCL12, PBSF, SCYB12, SDF-1a, SDF-1b, SDF1, SDF1A, SDF1B, TLSF-a, TLSF-b, TPAR1

Protein Construction:

A DNA sequence encoding the human CXCL12 isoform alpha (P48061-2) (Lys 22-Lys 89) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human CXCL12 consists of 84 amino acids and predicts a molecular mass of 10 kDa. It migrates as an approximately 12 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hard copy of COA. Please contact us for any concerns or special requirements.

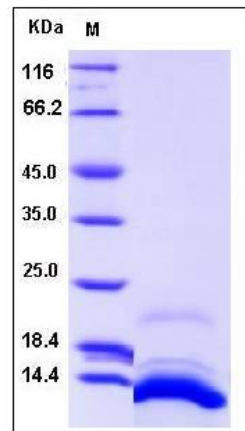
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Stromal cell-derived factor 1, also known as CXCL12, is a chemokine that belongs to the CXC family. It is a secreted protein which belongs to the intercrine family (chemokine CXC family). CXCL12/SDF-1 is widely expressed in various organs including heart, liver, brain, kidney, skeletal muscle, and lymphoid organs, and is highly conserved between species. CXCL12/SDF-1 is expressed in two isoforms from a single gene that encode two splice variants, SDF1α and SDF1β, which are identical except for the four residues present in the C-terminus of SDF1β but absent from SDF1α. As a highly efficacious lymphocyte chemoattractant, CXCL12/SDF-1 activates and directs the migration of leukocytes in response to proinflammatory stimuli such as LPS, TNF, or interleukins. It has been demonstrated that CXCL12/SDF-1 promotes tumor growth and malignancy, enhances tumor angiogenesis, participates in tumor metastasis, and thus plays an important role in carcinogenesis. In addition, CXCL12/SDF-1 is identified as the biological ligand for CXCR4, a chemokine receptor 4 (CXCR4), which is widely expressed in leukocytes and acts as the cofactor for HIV-1 entry, and inhibits the HIV-1 infection. Furthermore, SDF1 is rapidly inactivated via N-terminal processing by cathepsin G associated with the membrane of B-cells, NK cells and to a lesser extent, T-cells.

References

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5. Kryczek I. et al., 2007, Am J Physiol Cell Physiol. 292: C987-95.
6. Bbalabanian K. et al., 2005, J Biol Chem. 280: 35760-6.

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Fax : +86-10-51029969 • Tel: +86-400-890-9989 • <http://www.sinobiological.com>