

Human CXCL12 / SDF-1 Protein

Catalog Number: 10118-HNAE



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 beta (P48061-1) (Lys 22-Met 93) was expressed and purified

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % 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 73 amino acids and predicts a molecular mass of 8.6 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 hardcopy of COA. Please contact us for any concerns or special requirements.

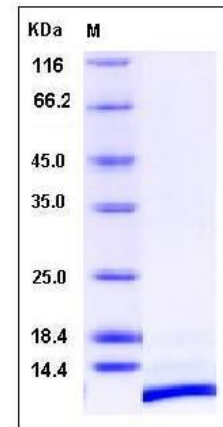
Usage Guide

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 C-X-C motif chemokine 12, Interleukin 8, reduced in hepatomas, Pre-B cell growth-stimulating factor, SDF-1, PBSF, CXCL12 and SDF1, is a secreted protein which belongs to the intercrine alpha (chemokine Cx-C) 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 encodes two splice variants, SDF1 α and SDF1 β , which are identical except for the four residues present in the C-terminus of SDF1 β but absent from SDF1 α . 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 carcinoma pathogenesis. In addition, CXCL12 / SDF-1 is identified as the biological ligand for 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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3. Delgado, M.B. et al., 2001, Eur. J. Immunol. 31: 699-707.
4. Orimo, A. et al., 2005, Cell. 121: 335-348.
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