Human CXCL12 / SDF-1 Protein (isoform a)

Catalog Number: **13511-HNCE**

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 and purified.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 97 % 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 ℃

Predicted N terminal: Lys 22

Molecular Mass:

The recombinant human CXCL12 consists of 68 amino acids and predicts a molecular mass of 8 KDa.

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.

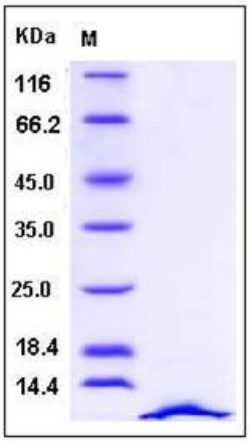
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ 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, Intercrine 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 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 encodes 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 carcinoma pathogenesis. In addition, CXCL12 / SDF-1 is identified as the biological ligand for CXC-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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2. Sapede D. et al., 2005, Proc Natl Acad Sci. 102: 1714-8.
3. Delgado MB. et al., 2001, Eur J Immunol. 31: 699-707.
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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.