# Cynomolgus CXCL12 / SDF-1 Protein (Fc Tag)

**Catalog Number:** **90009-C02H**

Sino Biological Inc.
Biological Solution Specialist

## General Information

**Gene Name Synonym:**

CXCL12

**Protein Construction:**

A DNA sequence encoding the Cynomolgus (Macaca fascicularis) CXCL12 (NP_001036851.1) (Met 1-Lys 89) was fused with the Fc region of human IgG1 at the C-terminus.

**Source:** Cynomolgus

**Expression Host:** Human Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

**Bio-Activity**

**Measured by its ability to bind biotinylated recombinant human DPPIV in a functional ELISA.**

**Endotoxin:**

< 1.0 EU per μg of the protein as determined by the LAL method

**Stability:**

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

**Predicted N terminal:** Lys 23

**Molecular Mass:**

The recombinant cynomolgus CXCL12/Fc is a disulfide-linked homodimer The reduced monomer consists of 309 amino acids and has a calculated molecular mass of 34.8 kDa. The apparent molecular mass of the reduced cynomolgus CXCL12/Fc monomer is approximately 39 kDa in SDS-PAGE under reducing conditions due to glycosylation.

**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.

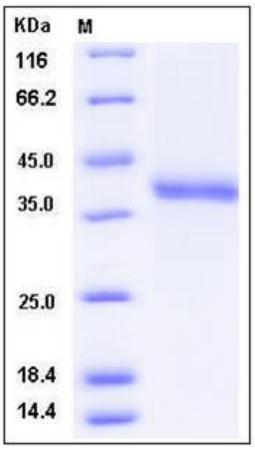
## Usage Guide

**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 theintercrine 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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3. Delgado, M.B. et al., 2001, Eur. J. Immunol. 31: 699-707.
4. Orimo, A. et al., 2005, Cell. 121: 335-348.
5. Kryczek, I. et al., 2007, Am. J. Physiol. Cell. Physiol. 292: C987-995.
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