

# Recombinant Feline Chemokine (C-X-C Motif) Ligand 12(SDF-1b)

**Cat. No.** CXCL12-110F    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant Feline Stromal Cell-Derived Factor-1 beta produced in <i>E. Coli</i> is a non-glycosylated, Polypeptide chain containing 72 amino acids and having a molecular mass of 8526 Dalton. The SDF-1b is purified by proprietary chromatographic techniques.
<b>Species</b>	Feline
<b>Source</b>	E.coli
<b>Description</b>	SDF-1 (stromal cell-derived factor-1) is small cytokine belonging to the chemokine family that is officially designated Chemokine (C-X-C motif) ligand 12 (CXCL12). It is produced in two forms, SDF-1 $\alpha$ /CXCL12a and SDF-1 $\beta$ /CXCL12b, by alternate splicing of the same gene. Chemokines are characterized by the presence of four conserved cysteines, which form two disulfide bonds. The CXCL12 proteins belong to the group of CXC chemokines, whose initial pair of cysteines are separated by one intervening amino acid. CXCL12 is strongly chemotactic for lymphocytes and has been implicated as an important cell co-ordinator during development. During embryogenesis it directs the migration of hematopoietic cells from foetal liver to bone marrow. Mice which were knocked-out for CXCL12 gene were lethal before the birth or within just 1 hour of life. As another role, CXCL12a alters also the electrophysiology of neurons.
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.

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<b>Formulation</b>	The protein was lyophilized from a concentrated (1 mg/ml) sterile solution containing no additives.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized SDF-1b in sterile 18MΩ-cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
<b>Biological Activity</b>	The specific activity as determined by its ability to chemoattract human peripheral T cells stimulated with IL-2 and PHA in a concentration range from 10-75 ng/ml.
<b>Purity</b>	Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
<b>Storage</b>	Lyophilized SDF-1b although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CXCL12 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

## GENE INFORMATION

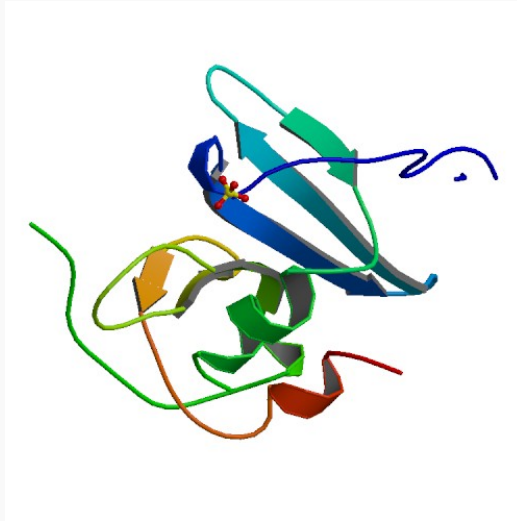
<b>Gene Name</b>	CXCL12 chemokine (C-X-C motif) ligand 12 [ <i>Felis catus</i> ]
<b>Synonyms</b>	CXCL12; chemokine (C-X-C motif) ligand 12; SDF-1; stromal cell-derived factor 1
<b>Gene ID</b>	493806
<b>mRNA Refseq</b>	NM_001009847
<b>Protein Refseq</b>	NP_001009847
<b>UniProt ID</b>	O62657

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