

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

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

SPECIFICATION

Product Overview	Recombinant Feline Stromal Cell-Derived Factor-1 beta produced in <i>E. Colli</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.
Species	Feline
Source	E.coli
Description	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 α /CXCL12a and SDF-1 β /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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.

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Formulation	The protein was lyophilized from a concentrated (1 mg/ml) sterile solution containing no additives.
Solubility	It is recommended to reconstitute the lyophilized SDF-1b in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	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.
Purity	Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Storage	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

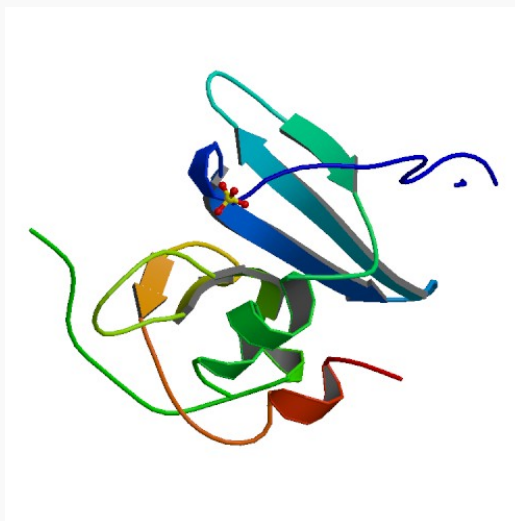
Gene Name	CXCL12 chemokine (C-X-C motif) ligand 12 [<i>Felis catus</i>]
Synonyms	CXCL12; chemokine (C-X-C motif) ligand 12; SDF-1; stromal cell-derived factor 1
Gene ID	493806
mRNA Refseq	NM_001009847
Protein Refseq	NP_001009847
UniProt ID	O62657

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