

## Recombinant Rat Cxcl12 protein

Cat. No. Cxcl12-111R Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Rat Cxcl12 beta protein was expressed in Escherichia coli.

**Species** Rat

**Source** E.coli

**ProteinLength** 72

**Description**

CXCL12 also known as SDF-1 is belonging to the CXC chemokine family. Rat CXCL12 is expressed as two isoforms that differ only in the C-terminal tail. And both SDF-1 isoforms undergo proteolytic processing of the first two N-terminal amino acids. In all SDF-1 isoforms, SDF-1 $\beta$  is the canonical sequence. It has the complete amino acids in the C-terminal tail. On the cell surface, the receptor for this chemokine is CXCR4 and syndecan4. CXCL12 is strongly chemotactic for T-lymphocytes, monocytes, but not neutrophils. SDF-1 is highly conserved between species, murine CXCL12 $\beta$  shares approximately 96 % amino acid sequence identity with human CXCL12 $\beta$ .

**Form**

Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.

**Bio-activity**

Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human peripheral blood monocytes is in a concentration range of 100-200 ng/ml.

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<b>Molecular Mass</b>	Approximately 8.4 kDa, a single non-glycosylated polypeptide chain containing 72 amino acids.
<b>AA Sequence</b>	KPVLSYRCP CRFFESHVARANVKHLKILNTPNCALQIVARLKSNRQVCIDPKLKWI QEYLDKALNKRLKM
<b>Endotoxin</b>	Less than 1 EU/μg of rRtSDF-1β/CXCL12β as determined by LAL method.
<b>Purity</b>	>97% by SDS-PAGE and HPLC analysis.
<b>Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

## GENE INFORMATION

<b>Gene Name</b>	Cxcl12
<b>Official Symbol</b>	Cxcl12
<b>Synonyms</b>	CXCL12; chemokine (C-X-C motif) ligand 12; SDF-1 gamma; Stromal cell-derived factor 1; stromal cell-derived factor-1 gamma; chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1); Sdf1;

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Gene ID	24772
mRNA Refseq	NM_001033882
Protein Refseq	NP_001029054
UniProt ID	Q9QZD1

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