

Recombinant Rat Cxcl12 protein

Cat. No. Cxcl12-65R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Cxcl12 alpha protein was expressed in Escherichia coli.
Species	Rat
Source	E.coli
ProteinLength	68
Description	CXCL12 also known as SDF-1 is belonging to the CXC chemokine family. It is encoded by the CXCL12 gene. 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. Contrast to SDF-1β, SDF-1α is shorter by four amino acids at 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, rat CXCL12α shares approximately 96% amino acid sequence identity with human CXCL12α.
Form	Lyophilized from a 0.2 μ 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 50-100 ng/ml.

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Molecular Mass	Approximately 7.9 kDa, a single non-glycosylated polypeptide chain containing 68 amino acids.
AA Sequence	KPVLSYRCPCRFFESHVARANVKHLKILNTPNCALQIVARLKSNRQVCIDPKLKWI QEYLDKALNK
Endotoxin	Less than 1 EU/μg of rRtSDF-1α/CXCL12α as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	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.
Reconstitution	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

Gene Name	Cxcl12
Official Symbol	Cxcl12
Synonyms	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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