

## Recombinant Rat Stromal-Cell Derived Factor-1 beta/CXCL12 beta

#R00451

Size: 10 µg/100 µg/500 µg

### Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



**Warning:** This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

### Background

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-1β 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 CXCL12β shares approximately 96 % amino acid sequence identity with human CXCL12β.

### AA Sequence

KPVLSYRCPCRFFESHVARANVKHLKILNTPNCALQI  
VARLKSNRQVCIDPKLKWIQEYLDKALNKRLKM

### 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 °C. Further dilutions should be made in appropriate buffered solutions.

### Product Specification

|                            |                                                                                                                                                                                                       |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accession</b>           | Q9QZD1                                                                                                                                                                                                |
| <b>GeneID</b>              | 24772                                                                                                                                                                                                 |
| <b>Species</b>             | Rat                                                                                                                                                                                                   |
| <b>Source</b>              | Escherichia coli.                                                                                                                                                                                     |
| <b>Molecular Weight</b>    | Approximately 8.4 kDa, a single non-glycosylated polypeptide chain containing 72 amino acids.                                                                                                         |
| <b>Purity</b>              | > 97 % by SDS-PAGE and HPLC analyses.                                                                                                                                                                 |
| <b>Biological Activity</b> | 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. |
| <b>Physical Appearance</b> | Sterile Filtered White Lyophilized (freeze-dried) powder.                                                                                                                                             |

|                    |                                                                                            |
|--------------------|--------------------------------------------------------------------------------------------|
| <b>Formulation</b> | Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl. |
| <b>Endotoxin</b>   | Less than 1 EU/μg of rRtSDF-1β/CXCL12β as determined by LAL method.                        |