

## Active Recombinant Rat Cxcl12 protein, His-GST-tagged

**Cat. No.** Cxcl12-521R    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Product Overview</b> | Active Recombinant Rat Cxcl12 protein(Q9QZD1)(21~89 aa), fused with N-terminal His tag and GST tag, was expressed in E.coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>ProteinLength</b>    | 21-89 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Form</b>             | Lyophilized from sterile 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Bio-activity</b>     | <p>The stromal cell-derived factor 1 (SDF1), also known as C-X-C motif chemokine 12 (CXCL12), is a chemokine protein. SDF1 is strongly chemotactic for lymphocytes. During embryogenesis, it directs the migration of hematopoietic cells from fetal liver to bone marrow and the formation of large blood vessels. CXCL12 is also chemotactic for mesenchymal stem cells and is expressed in the area of inflammatory bone destruction, where it mediates their suppressive effect on osteoclastogenesis. Besides, Chemokine C-C-Motif Receptor 1 (CCR1) has been identified as an interactor of SDF1, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat SDF1 and recombinant rat CCR1. Briefly, SDF1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100μL were then transferred to CCR1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-SDF1 pAb, then aspirated and</p> |

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washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µ stop solution to the wells and read at 450nm immediately. The binding activity of SDF1 and CCR1 was shown, and this effect was in a dose dependent manner.

|                       |                                                                                                            |
|-----------------------|------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 38.0kDa                                                                                                    |
| <b>Endotoxin</b>      | <1.0EU per 1µg (determined by the LAL method).                                                             |
| <b>Purity</b>         | > 95% as determined by SDS-PAGE.                                                                           |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months. |
| <b>Reconstitution</b> | Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.          |

## GENE INFORMATION

|                        |                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Cxcl12 chemokine (C-X-C motif) ligand 12 [ <i>Rattus norvegicus</i> ]                                                                                                                                |
| <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; |
| <b>Gene ID</b>         | 24772                                                                                                                                                                                                |
| <b>mRNA Refseq</b>     | NM_001033882                                                                                                                                                                                         |

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Protein Refseq

NP\_001029054

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