

## Recombinant Human CXCL12 (SDF-1 beta)

Cat No:HR2R1308

For research use only

### Overview

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| Quantity           | 1.0 ?g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Gene Symbol        | CXCL12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Gene ID            | 6387                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Accession          | P48061                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Alternative Name   | Stromal cell-derived factor 1, SDF-1, hSDF-1, C-X-C motif chemokine 12, Intercrine reduced in hepatomas, IRH, Pre-B cell growth-stimulating factor, PBSF<br/>Recombinant Human Stromal Cell-Derived Factor-1 Beta (CXCL12)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Species            | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Source             | E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Description        | A member of the CXC chemokine family, CXCL12 is strongly chemotactic for T-, B-, and cancer cells. Known to exert its effects mainly through binding to the CXCR4 receptor, CXCL12 plays an important role in morphogenesis, angiogenesis, and cancer metastasis. CXCL12 also binds to atypical chemokine receptor ACKR3, which activates the beta-arrestin pathway and acts as a scavenger receptor for CXCL12. Encoded by a single gene, SDF-1 alpha (89 amino acids) and SDF-1 beta (93 amino acids) are derivatives of an alternative splicing event. SDF-1? and SDF-1? have identical amino acid sequences, differing only, by the presence of four extra amino acids at the C-terminus of the ? form. SDF-1 beta is constitutively expressed by stromal cells. |
| Functions          | Determined by its ability to chemoattract human peripheral T cells activated with PHA and IL-2 using a concentration range of 5.0-40 ng/mL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Formulation        | Lyophilized from a 0.2 ?m filtered solution in sodium phosphate and NaCl (pH 7.5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Solubility         | A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Appearance         | Lyophilized Powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Molecular Weight   | 8.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Purity             | >95% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Concentration      | <1.0 EU/?g of recombinant protein as determined by the LAL method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Shipping Condition | Ambient Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Storage Condition  | The lyophilized protein is stable for at least one year from date of receipt at -70°C. Upon reconstitution, this cytokine can be stored in working aliquots at 2? - 8°C for one month, or at -20°C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |