

Growth Factor Data Sheet

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Rat CXCL12 is a CXC chemokine lacking the ELR motif. It was first found in bone marrow stromal cells and is expressed in bone marrow stromal cells constitutively as well as a wide variety of cells with the exception of blood cells. Expression of CXCL12 is downregulated in fibroblasts by the phorbol ester TPA and in serum-deprived fibroblasts that have been stimulated by serum. CXCL12 acts as a ligand for CXCR4 and CXCR7. It is chemotactic for hematopoietic progenitor cells expressing CD34, mononuclear cells, and cerebellar granule cells. CXCL12 plays a role in lymphopoiesis, myelopoiesis, vascularization of the gastrointestinal tract, and cerebellar development. CXCL12-alpha is one of six alternatively spliced isoforms of the CXCL12 gene. It is four amino acids shorter at the C-terminus than the canonical sequence, CXCL12-beta.

Catalog Number	2510-12A
Product Name	CXCL12-alpha, Rat Recombinant Rat Chemokine (C-X-C motif) Ligand 12, Alpha (CXCL12 α) Stromal Cell-Derived Factor 1 (SDF1) Small Inducible Cytokine Subfamily B Member 12 (SCYB12) Pre-B Cell Growth-Stimulating Factor (PBSF) Thymic Lymphoma Cell-Stimulating Factor (TLSF)
Source	<i>Escherichia coli</i>
MW	~7.9 kDa (68 amino acids)
Sequence	KPVSLSYRCP CRFFESHVAR ANVKHLKILN TPNCALQIVA RLKSNRQVC IDPKLKWIQE YLDKALNK
Accession Number	Q9QZD1
Purity	>97% by SDS-PAGE and HPLC analyses
Biological 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.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.