

## Active Recombinant Mouse Cxcl12 Protein (68 aa)

Cat. No. Cxcl12-208C Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Mouse SDF-1 $\alpha$ /CXCL12 produced in CHO cells is a polypeptide chain containing 68 amino acids. A fully biologically active molecule, rm SDF-1 $\beta$ /CXCL12 has a molecular mass of 8 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
<b>Species</b>	Mouse
<b>Source</b>	CHO
<b>ProteinLength</b>	68
<b>Description</b>	<p>SDF-1 <math>\alpha</math> and SDF-1 <math>\beta</math>, members of the chemokine <math>\alpha</math> subfamily that lack the ELR domain, were initially identified using the signal sequence trap cloning strategy from a mouse bone-marrow stromal cell line. SDF-1 <math>\alpha</math> and SDF-1 <math>\beta</math> cDNAs encode precursor proteins of 89 and 93 amino acid residues, respectively. Both SDF-1 <math>\alpha</math> and SDF-1 <math>\beta</math> are encoded by a single gene and arise by alternative splicing. The two proteins are identical except for the four amino acid residues that are present in the carboxy-terminus of SDF-1 <math>\beta</math> and absent from SDF-1 <math>\alpha</math>. SDF-1/PBSF is highly conserved between species, with only one amino acid substitution between the mature human and mouse proteins. SDF-1/PBSF acts via the chemokine receptor CXCR4 and has been shown to be a chemoattractant for T-lymphocytes, monocytes, pro- and pre-B cells, but not neutrophils. Mice lacking SDF-1 or CXCR4 have been found to have impaired B-lymphopoiesis, myelopoiesis, vascular development, cardiogenesis and abnormal neuronal cell migration and patterning in the central</p>

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	nervous system.
<b>Form</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Bio-activity</b>	The EC50 value of mouse SDF-1 $\alpha$ /CXCL12 on Ca <sup>2+</sup> mobilization assay in CHO-K1/G $\alpha$ 15/mCXCR4 cells (human G $\alpha$ 15 and mCXCR4 stably expressed in CHO-K1 cells) is less than 1.5 $\mu$ g/mL.
<b>Molecular Mass</b>	8 kDa, observed by reducing SDS-PAGE.
<b>AA Sequence</b>	KPVLSYRCPCRFFESHIANVKHLKILNTPNCALQIVARLKNNNRQVCIDPKLKWI QEYLEKALNK
<b>Endotoxin</b>	< 0.2 EU/ $\mu$ g, determined by LAL method.
<b>Purity</b>	> 95% as analyzed by SDS-PAGE.
<b>Storage</b>	Lyophilized recombinant Mouse SDF-1 $\alpha$ /CXCL12 remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, Mouse SDF-1 $\alpha$ /CXCL12 should be stable up to 1 week at 4 centigrade or up to 3 months at -20 centigrade.
<b>Storage Buffer</b>	Lyophilized after extensive dialysis against PBS.
<b>Reconstitution</b>	Reconstituted in ddH <sub>2</sub> O or PBS at 100 $\mu$ g/mL.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	Cxcl12 chemokine (C-X-C motif) ligand 12 [ <i>Mus musculus</i> ]
<b>Official Symbol</b>	Cxcl12

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<b>Synonyms</b>	CXCL12; chemokine (C-X-C motif) ligand 12; stromal cell-derived factor 1; C-X-C motif chemokine 12; pre-B cell growth-stimulating factor; pre-B-cell growth-stimulating factor; thymic lymphoma cell-stimulating factor; 12-O-tetradecanoylphorbol 13-acetate repressed protein 1; Pbsf; Sdf1; Tlsf; Sdf1a; Sdf1b; Tlsfa; Tlsfb; Tpar1; Scyb12; AI174028;
<b>Gene ID</b>	<a href="#">20315</a>
<b>mRNA Refseq</b>	<a href="#">NM_001012477</a>
<b>Protein Refseq</b>	<a href="#">NP_001012495</a>
<b>UniProt ID</b>	<a href="#">P40224</a>

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