

Product Name: Recombinant Mouse CXCL12
Catalog #: PEM1576

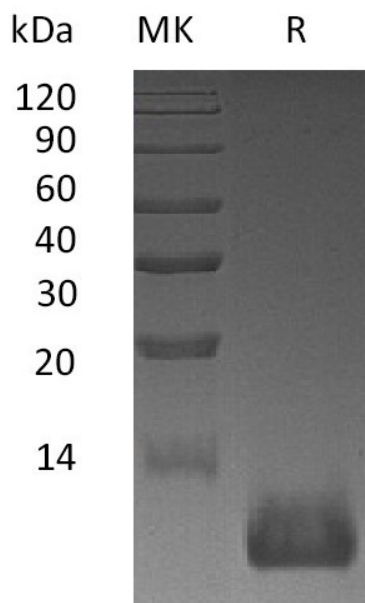


Summary

Name	CXCL12/SDF-1 alpha/Stromal cell-derived factor 1
Purity	Greater than 95% as determined by reducing SDS-PAGE
Endotoxin level	<1 EU/μg as determined by LAL test.
Construction	Recombinant Mouse C-X-C Motif Chemokine 12 is produced by our E.coli expression system and the target gene encoding Lys22-Lys89 is expressed.
Accession #	P40224
Host	E.coli
Species	Mouse
Predicted Molecular Mass	8.1 KDa
Formulation	Lyophilized from a 0.2 μm filtered solution of 25mM Tris-HCl, 150mM NaCl, pH 8.5 .
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
Stability&Storage	Lyophilized protein should be stored at ≤ -20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100μg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles. Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100μg/ml. Dissolve the lyophilized protein in distilled water. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

SDS-PAGE image

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Alternative Names

Cxcl12; Stromal cell-derived factor 1; SDF-1; 12-O-tetradecanoylphorbol 13-acetate repressed protein 1; TPAR1; C-X-C motif chemokine 12; Pre-B cell growth-stimulating factor; PBSF; Thymic lymphoma cell-stimulating factor; TLSF; Sdf1

Background

Mouse Cxcl12 is a secreted and highly conserved protein which belongs to the intercrine alpha (chemokine Cx) family. CXCL12 is widely expressed in various organs including brain, kidney, skeletal muscle, heart, liver, and lymphoid organs. Cxcl12 activates the C-X-C chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular calcium ions and chemotaxis. It also binds to atypical chemokine receptor ACKR3 which activates the beta-arrestin pathway and acts as a scavenger receptor for SDF-1. Cxcl12 has several critical functions during embryonic development such as B-cell lymphopoiesis, myelopoiesis in bone marrow and heart ventricular septum formation. Cxcl12 plays an important role in acting as a positive regulator of monocyte migration and a negative regulator of monocyte adhesion via the LYN kinase. It stimulates migration of monocytes and T-lymphocytes through its receptors, CXCR4 and ACKR3, and decreases monocyte adherence to surfaces coated with ICAM-1, a ligand for beta-2 integrins. SDF1A/CXCR4 signaling axis inhibits beta-2 integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase. It also plays a protective role after myocardial infarction, induces down-regulation and internalization of ACKR3 expressed in various cells and stimulates the proliferation of bone marrow-derived b progenitor cells in the presence of IL-7 as well as growth of the stromal cell-dependent B-cell clone DW34 cells.

Note

For Research Use Only , Not for Diagnostic Use.