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Product datasheet for TP726859

Cxcl12 Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Mouse C-X-C Motif Chemokine 12/CXCL12/SDF-1 Î±
Species:	Mouse
Expression cDNA Clone or AA Sequence:	Lys22-Lys89
Buffer:	Lyophilized from a 0.2 um filtered solution of 25mM Tris-HCl,150mM NaCl,pH8.5.
Note:	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.
Stability:	12 months from date of despatch
Locus ID:	20315
UniProt ID:	P40224
Summary:	Mouse Cxcl12 is a secreted and highly conserved protein which belongs to the intercrine alpha (chemokine CxC) 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.

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