CXCL16, mouse recombinant (rmCXCL16)

Catalog No: 99957
Lot No: XXXXX
Source: *E. coli*
Synonyms: C-X-C motif chemokine 16, Small-inducible cytokine B16, Transmembrane chemokine CXCL16, Scavenger receptor for phosphatidylserine and oxidized low density lipoprotein, SR-PSOX, Cxcl16, Srpsox, Zmynd15, AV290116, BB024863, 0910001K24Rik

Background

Mouse CXCL16 is a non-ELR motif including a CXC chemokine with a transmembrane domain. Mouse CXCL16 cDNA encodes a 246 amino acid (aa) precursor protein with a putative 26 aa residue signal peptide, an 88 aa residue chemokine domain, an 87 aa residue mucinlike spacer region, a 22 aa residue transmembrane domain, and a 23 aa residue cytoplasmic tail. CXCL16 induces strong chemotactic responses and calcium mobilization. Furthermore, CXCL16 acts as a scavenger receptor on macrophages, which specifically binds to OxLDL (oxidized low density lipoprotein), suggesting that it may be involved in pathophysiology such as atherogenesis. Mouse CXCL16 is generated by dendritic cells in lymphoid organ T cell zones, as well as by cells in the splenic red pulp, both as membrane bound and soluble forms. CXCR6/Bonzo (STRL33 and TYMSTR) is the receptor for CXCL16. CXCL16 is expressed in the spleen, lymph nodes, and Peyer patches. It is also expressed in non-lymphoid tissues such as lung, kidney, small intestine and thymus, with weak expression in the heart and liver and no expression in the brain and purified B- and T-cells. CXCL16 deficiency is linked to breast cancer progression. In addition, CXCL16 is involved in immunological liver injury by regulating T-lymphocyte infiltration in liver tissue. Furtheremore, CXCL16 has a distinctive role in the maintenance of cardiac allograft tolerance mediated by natural killer T-cells. It also has a significant role in not only the production of IFN-γ by NKT cells, but also promotion of Th1-inclined immune responses mediated by NKT cells.

Description

CXCL16 Mouse Recombinant, produced in *E. coli*, is a single, non-glycosylated polypeptide chain containing 88 amino acids. It has a molecular mass of 9.9 kDa. The CXCL16 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered, white, lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a concentrated (1.0 mg/ml) solution in 20 mM PB (pH 7.4) and 50 mM NaCl.

Solubility

It is recommended to reconstitute the lyophilized CXCL16 Mouse in sterile 18 MΩ-cm H_2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized CXCL16, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CXCL16 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Amino Acid Sequence

NQGSVAGSCS CDRTISSGTQ IPQGTLDHIR KYLKAFHRCP FFIRFQLQSK SVCGGSQDQW VRELVDCFER KECGTGHGKS FHHQKHLP

Activity

Determined by its ability to chemoattract murine lymphocytes, using a concentration range of 100-1000 ng/ml, corresponds to a specific activity of 1,000-10,000 IU/mg.

Usage

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