



## CXCL16, mouse recombinant (rmCXCL16)

**Catalog No:** 97257  
**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 nonELR motif including CXC chemokine with a transmembrane domain. Mouse CXCL16 cDNA encodes a 246 a.a. precursor protein with a putative 26 a.a. residue signal peptide, an 88 a.a. residue chemokine domain, an 87 a.a. residue mucinlike spacer region, a 22 a.a. residue transmembrane domain, and a 23 a.a. residue cytoplasmic tail. CXCL16 induces a strong chemotactic response 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 membranebound 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 heart and liver and no expression in 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. Furthermore, CXCL16 has a distinctive role in the maintenance of cardiac allograft tolerance mediated by natural killer T cells. Moreover, CXCL16 has a significant role in not only the production of IFN-gamma 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 and having a molecular mass of 9.9 kDa. 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 sodium phosphate buffer, pH 7.4 and 50 mM NaCl.

### Solubility

It is recommended to reconstitute the lyophilized CXCL16 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/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.

### Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

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### **Amino Acid Sequence**

NQGSVAGSCS CDRTISSGTQ IPQGTLDHIR KYLKAFHRCP FFIRFQLQSK SVCGGSQDQW VRELVDCFER KECGTGHGKS  
FHHQKHLF

### **Activity**

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

### **Usage**

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