



Product Information

CXCL16

Human, Recombinant
Expressed in *E. coli*

Product Number **C 8615**

Product Description

Recombinant Human CXCL16 is produced from a DNA sequence encoding the chemokine domain (Asn 49-Pro 137) of the transmembrane human chemokine CXCL16.¹ The protein is expressed in *E. coli*. The predicted molecular mass of recombinant human CXCL16 (89 amino acid residues) is approximately 10.1 kDa. Mouse and human CXCL16 share 70% amino acid sequence identity within their chemokine domains and 49% overall amino acid sequence identity.

CXCL16 (CXC chemokine ligand 16) is a type I membrane protein containing a non-ELR motif-containing CXC chemokine domain in its extracellular region. Fractalkine (CX3CL1) and CXCL16 constitute the only two transmembrane chemokines within the superfamily. The gene for human CXCL16 predicts a 273 amino acid residue precursor protein with a putative signal peptide, a CXC chemokine domain, a mucin-like spacer region, a transmembrane domain, and a cytoplasmic domain with a potential tyrosine phosphorylation and SH2 protein-binding site. Functional CXCL16 can be shed from the cell surface as an approximately 35 kDa soluble protein. The functional receptor for CXCL16 has been identified as CXCR6 (also known as Bonzo, STRL33, and TYMSTR), a receptor previously shown to be a co-receptor for HIV entry.² CXCL16 has also been independently cloned and named SRPSOX (scavenger receptor that binds phosphatidylserine and oxidized lipoprotein).³ It has been shown to be a specific receptor for OxLDL, but not LDL or acety-LDL.

By northern blot analysis, CXCL16 expression is detected in various human organs except for brain, bone marrow, skeletal muscle, and colon. By flow cytometry, CXCL16 has been detected on the surface

CD19⁺ B cells, CD14⁺ monocytes/macrophages, and CD11c⁺ splenic and lymph node dendritic cells.

Reagent

Recombinant Human CXCL16 is supplied as approximately 25 µg of protein lyophilized from a 0.2 µm filtered solution of phosphate buffered saline (PBS) containing 1.25 mg bovine serum albumin.

Storage/Stability

Prior to reconstitution, store at -20 °C. The reconstituted product should be frozen in working aliquots at -20 °C. Avoid repeated freezing and thawing.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 µm filtered phosphate buffered saline containing 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 25 µg/ml.

Product Profile

The biological activity is measured by its ability to induce chemotaxis of mouse CXCR6 transfected BaF/3 cells.¹

Endotoxin: < 1.0 EU (endotoxin unit)/µg cytokine as determined by the LAL method.

References

1. Matloubian, M., et al., *Nature Immunol.*, **1**, 298-304 (2000).
2. Wilbanks, A., et al., *J. Immunol.*, **166**, 5145-5154 (2001).
3. Shimaoka, T., et al., *J. Biol. Chem.*, **275**, 40663-40666 (2000).

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