

DESCRIPTION

Source *E. coli*-derived human CXCL16 protein
Asn30 - Pro118
Accession # Q9H2A7.4

N-terminal Sequence Analysis Asn30

Predicted Molecular Mass 10.2 kDa

SPECIFICATIONS

SDS-PAGE 10 kDa, reducing conditions

Activity Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with mouse CXCR6. Matloubian, M. *et al.* (2000) Nat. Immunol. 1:298.
The ED₅₀ for this effect is 2.5-12 ng/mL.

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 25 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CXC chemokine ligand 16 (CXCL16) is a type I membrane protein containing a non-ELR motif-containing CXC chemokine domain in its extracellular region. Together with Fractalkine (CX3CL1), CXCL16 constitute the only two transmembrane chemokines within the superfamily. The gene for human CXCL16 predicts a 273 amino acid (aa) 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. Mouse and human CXCL16 share 70% aa sequence similarity within their chemokine domains and 49% overall aa sequence identity. By northern blot analysis, CXCL16 expression is detected in various human organs except for brain, bone marrow, skeletal muscle or 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. 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 or TYMSTR), a receptor previously shown to be a co-receptor for HIV entry. CXCL16 has also been independently cloned and named SRPSOX (scavenger receptor that binds phosphatidylserine and oxidized lipoprotein). It was shown to be a specific receptor for OxLDL but not LDL or acetyl-LDL.

References:

1. Matloubian, M. *et al.* (2000) Nature Immun. 1:298.
2. Shimaoka, T. *et al.* (2000) J. Biol. Chem. 275:40663.
3. Wilbanks, A. *et al.* (2001) J. Immun. 166:5145.