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Recombinant Human CXCL16 Protein

Catalog No.: RP02131 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	58191	Q9H2A7

Tags
C-His

Synonyms
CXCL16;CXCLG16;SR-PSOX;SRPSOX

Product Information

Source
HEK293 cells

Purification
> 95% by SDS-PAGE.

Endotoxin
< 1.0 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

C-X-C motif chemokine 16, also known as Small-inducible cytokine B16, SR-PSOX, and CXCL16, is a single-pass type I membrane protein which belongs to the intercrine alpha (chemokine CxC) family. CXCL16 exists in transmembrane and soluble forms. The transmembrane form acts as a scavenger receptor for oxidised LDL whereas the soluble form acts a chemoattractant for mainly CD8+ T cells. CXCL16 is a protein which shares pattern recognition receptor functions, relevant for adhesion and phagocytosis of bacterial products, with the properties of an adhesion molecule and inflammatory chemokine. CXCL16/SR-PSOX is an interferon-gamma-regulated chemokine and scavenger receptor for oxidized low-density lipoprotein that is expressed in atherosclerotic lesions. Proteolytic cleavage of membrane-bound CXCL16 releases soluble CXCL16, which may promote migration of effector T cells and augment a proatherogenic inflammatory response. CXCL16/SR-PSOX can be a potential player in atherogenesis. Enhanced expression of CXCL16 has been demonstrated in atherosclerotic plaques and several properties have been attributed to CXCL16 that could influence the atherosclerotic process. Following in vitro studies suggested that as an adhesion molecule CXCL16/SR-PSOX might mediate T-cell adhesion to the endothelium, as a chemokine-drive T-cell migration, stimulate cell proliferation and elicit inflammatory phenotype in smooth muscle cells (SMC) and, finally, as a scavenger receptor-mediate uptake of atherogenic lipoproteins by macrophages and SMC. CXCR6 and its ligand CXCL16 in regulating metastasis and invasion of cancer. CXCR6 and CXCL16 are up-regulated in multiple cancer tissue types and cancer cell lines relative to normal tissues and cell lines. In addition, both CXCR6 and CXCL16 levels increase as tumor malignancy increases. Thus, CXCL16 and CXCR6 may mark cancers arising in an inflammatory milieu and mediate pro-tumorigenic effects of inflammation through direct effects on cancer cell growth and by inducing the migration and proliferation of tumor-associated leukocytes.

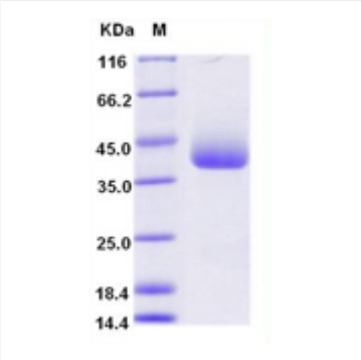
Basic Information

Description
Recombinant Human CXCL16 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Thr224) of human CXCL16 (Accession #NP_071342.2) fused with a 6×His tag at the C-terminus.

Bio-Activity
Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with mouse CXCR6. The ED50 for this effect is 50-250 ng/mL.

Storage
Store the lyophilized protein at -20°C to -80°C for long term.
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.
Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human CXCL16 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 38-40 kDa.