

CXCL10
Catalog # PVGS1661

Specification

CXCL10 - Product Information

Primary Accession [P17515](#)
Species
Mouse

Sequence
Ile22-Pro98

Purity
> 97% as analyzed by SDS-PAGE
> 97% as analyzed by HPLC

Endotoxin Level
< 1 EU/ µg of protein by LAL method

Biological Activity
The biologically active determined by a chemotaxis bioassay using human peripheral blood lymphocytes is in a concentration range of 0.1-10.0 ng/ml in the presence of IL-2.

Expression System
E. coli

Theoretical Molecular Weight
8.7 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in 2 × PBS, pH 7.4.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -20°C or -70°C. Upon reconstitution, the product should be stable for up to 1 week at 2-8°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

CXCL10 - Additional Information

Gene ID 15945

Other Names
C-X-C motif chemokine 10, 10 kDa interferon gamma-induced protein, Gamma-IP10, IP-10, C7, Interferon-gamma induced protein CRG-2, Small-inducible cytokine B10, Cxcl10, Crg2, Ifi10, Inp10, Scyb10

Target Background

CXCL10 also known as IP-10 is belonging to the CXC chemokine family. It is encoded by the CXCL10 gene, and in murine it is also named the CRG-2 gene. The gene was originally identified as an immediate early gene induced in response to macrophage activation. This chemokine elicits its effects by binding to the cell surface chemokine receptor CXCR3. CXCL10 has been shown to be a chemoattractant for activated T-lymphocytes and monocytes/macrophages. It also has other roles, such as promotion of T cell adhesion to endothelial cells, and inhibition of bone marrow colony formation and angiogenesis. Murine CXCL10 shares approximately 67 % amino acid sequence identity with human CXCL10.

CXCL10 - Protein Information

Name Cxcl10

Synonyms Crg2, Ifi10, Inp10, Scyb10

Function

Pro-inflammatory cytokine that is involved in a wide variety of processes such as chemotaxis, differentiation, and activation of peripheral immune cells, regulation of cell growth, apoptosis and modulation of angiostatic effects (By similarity) (PubMed:28623423). Plays thereby an important role during viral infections by stimulating the activation and migration of immune cells to the infected sites (PubMed:18624292, PubMed:19017990, PubMed:28468883). Mechanistically, binding of CXCL10 to the CXCR3 receptor activates G protein-mediated signaling and results in downstream activation of phospholipase C-dependent pathway, an increase in intracellular calcium production and actin reorganization. In turn, recruitment of activated Th1 lymphocytes occurs at sites of inflammation (By similarity). Activation of the CXCL10/CXCR3 axis also plays an important role in neurons in response to brain injury for activating microglia, the resident macrophage population of the central nervous system, and directing them to the lesion site. This recruitment is an essential element for neuronal reorganization (PubMed:15456824).

Cellular Location

Secreted {ECO:0000250|UniProtKB:P02778}.

Tissue Location

Expressed in the spleen, thymus, lymph nodes and liver (PubMed:8145049). Expressed in astrocytes, microglia, and neurons (PubMed:15456824).

CXCL10 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)
- CXCL10 - Images**