

IP-10/CXCL10
Catalog # PVGS1228**Specification**

IP-10/CXCL10 - Product Information

Primary Accession [P02778](#)
Species
Human

Sequence
Val22-Pro98, expressed with an N-terminal Met

Purity
> 95% as analyzed by SDS-PAGE
> 95% as analyzed by HPLC

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 0.2 µg/ml, measured by a cell proliferation assay of HUVEC cells in the presence of 2.5 ng/ml h-VEGF, corresponding to a specific activity of > 5.0 × 10³ IU/mg.

Expression System
E. coli

Formulation **Lyophilized after extensive dialysis against 50 mM Tris, pH 8.0.**

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 ddH₂O up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

IP-10/CXCL10 - Additional Information

Gene ID 3627

Other Names
C-X-C motif chemokine 10, 10 kDa interferon gamma-induced protein, Gamma-IP10, IP-10, Small-inducible cytokine B10, CXCL10(1-73), CXCL10, INP10, SCYB10

Target Background
IP-10/CXCL10 also known as CXCL10, is originally identified as an IFN-γ-inducible gene in monocytes, fibroblasts and endothelial cells. It has since been shown that IP-10 mRNA is also

induced by LPS, IL-1 β , TNF- α , IL-12 and viruses. Additional cell types that have been shown to express IP-10 include activated T-lymphocytes, splenocytes, keratinocytes, osteoblasts, astrocytes, and smooth muscle cells. IP-10 is also expressed in psoriatic and lepromatous lesions of skin. The mouse homologue of human IP-10, Crg-2, has been cloned and shown to share approximately 67% amino acid sequence identity with human IP-10.

IP-10/CXCL10 - Protein Information

Name CXCL10

Synonyms 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 (PubMed:11157474, PubMed:22652417, PubMed:7540647). Plays thereby an important role during viral infections by stimulating the activation and migration of immune cells to the infected sites (By similarity). 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 (PubMed:12750173, PubMed:19151743). In turn, recruitment of activated Th1 lymphocytes occurs at sites of inflammation (PubMed:12663757, PubMed:12750173). 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 (By similarity).

Cellular Location

Secreted.

Tissue Location

Mainly secreted by monocytes, endothelial cells as well as fibroblasts. Expressed by epithelial cells in thymus (PubMed:11157474). Microglial cells produce CXCL10 in response to viral stimulation (PubMed:12663757).

IP-10/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](#)

IP-10/CXCL10 - Images