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IP-10/CXCL10

Catalog # PVGS1228

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	
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 ddH_2O up to 100 □g/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.

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-1β, 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.

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).