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CXCL10

Catalog # PVGS1488

Product Information

Primary Accession	P48973
Species	Rat
Sequence	IPLARTVRCT CIDFHEQPLR PRAIGKLEII PASLSCPHVE IIATMKKNNE KRCLNPESEA IKSLLKAVSQ RRSKRAP
Purity	> 98% as analyzed by SDS-PAGE.
Endotoxin Level	
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH_2O or PBS at 100 □g/ml.

Additional Information

Gene ID	245920
Other Names	C-X-C motif chemokine 10, 10 kDa interferon gamma-induced protein, Gamma-IP10, IP-10, Interferon-inducible protein 10, Protein Mob-1, Small-inducible cytokine B10, Cxcl10, Inp10, Mob1, Scyb10
Target Background	C-X-C motif chemokine 10 (CXCL10) also known as interferon gamma-induced protein 10 (IP-10) or small-inducible cytokine B10, 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 the skin. Recombinant rat IP-10/CRG-2/CXCL10 produced in HEK 293 cells is a polypeptide chain containing 77 amino acids. A fully biologically active molecule, rr IP-10/CRG-2/CXCL10 has a molecular mass of 8.7 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at .

Protein Information

Name	Cxcl10
Synonyms	Inp10, Mob1, 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). 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. 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 (By similarity) (PubMed:30257241, PubMed:30448292).
Cellular Location	Secreted {ECO:0000250|UniProtKB:P02778}.
Tissue Location	In the central nervous system, CXCL10 is predominantly localized to activated neurons (PubMed:30448292) Expressed in both microglia and astrocytes (PubMed:30257241)

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