Cytokines

Human Recombinant IP-10 (CXCL10)

Interferon gamma-inducible protein 10

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Catalog #78165.1 50 µg

Product Description

Interferon gamma-inducible protein (IP) 10 or CXCL10 is a member of the CXC chemokine family. It binds CXCR3, activating ERK1/2, 38/MAPK, JNK, and PI3-kinase/AKT signaling pathways, inducing intracellular calcium influx, DNA synthesis, cell proliferation, and chemotaxis. IP-10 regulates innate and adaptive immune responses by affecting the function of activated T cells, natural killer cells, inflammatory dendritic cells, macrophages, and B cells. IP-10 is produced by leukocytes, activated neutrophils, eosinophils, monocytes, epithelial cells, endothelial cells, fibroblasts, and keratinocytes in response to IFN-gamma. IP-10 has been implicated in a wide range of diseases, including infectious diseases and chronic inflammatory and autoimmune diseases, as well as in tumor formation (Liu et al.).

Product Information

Alternative Names:	10 kDa interferon-gamma-induced protein, C7, crg-2, Chemokine (C-X-C motif) ligand 10, CXCL10, Gamma-IP-10, gIP-10, IFI10, INP10, mob1, SCYB10, Small inducible cytokine B10
Accession Number:	P02778
Amino Acid Sequence:	MVPLSRTVRC TCISISNQPV NPRSLEKLEI IPASQFCPRV EIIATMKKKG EKRCLNPESK AIKNLLKAVS KERSKRSP
Predicted Molecular Mass:	8.8 kDa
Species:	Human
Formulation:	Lyophilized after dialysis against Tris buffer, pH 8.0.
Source:	*E. coli*

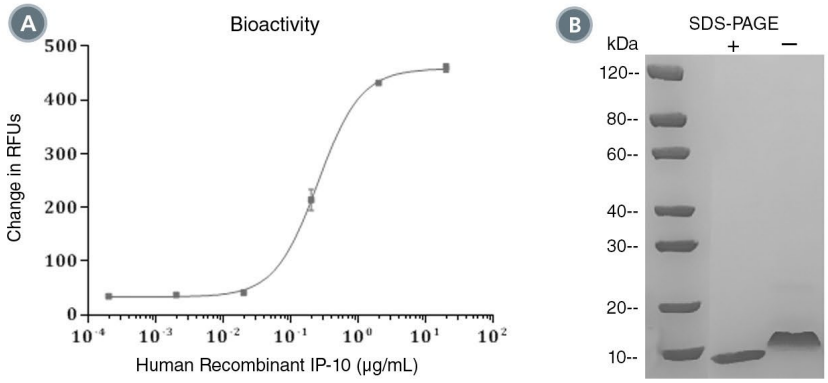
Specifications

Activity:	The specific activity is ≥ 5.0 x 10^3 units/mg (EC50 ≤ 0.2 µg/mL), as determined by a Ca2+ mobilization assay using CHO-K1 cells expressing human Gα15 and mouse CXCR3.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage:	Store at -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 2 weeks or at -20°C to -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant IP-10 (CXCL10) was tested using a Ca2+ mobilization assay in CHO-K1 stably expressing Gα15 and CXCR3. The EC50 is defined as the effective concentration of the growth factor at which calcium mobilization is at 50% of maximum. The EC50 in the example above is less than 0.2 µg/mL.
(B) 2 µg of Human Recombinant IP-10 (CXCL10) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IP-10 (CXCL10) has a predicted molecular mass of 8.8 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

Liu M et al. (2011) The emerging role of CXCL10 in cancer (Review). Oncol Lett 2(4): 583–9.