Active Interferon Gamma Induced Protein 10kDa (IP10)

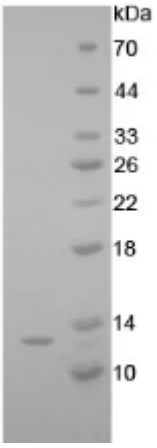
Catalog#:PXH12347

概述（Summary）

别称（Alternative Names）	CXCL10; C7; IFI10; INP10; SCYB10; Crg2; GIP10; Mob1; Chemokine C-X-C Motif Ligand 10; Small Inducible Cytokine Subfamily B(Cys-X-Cys)Member 10
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Val22-Pro98】
Accession #	P02778
表达宿主（Host）	-
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	12.4 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	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. Plays thereby an important role during viral infections by stimulating the activation and migration of immune cells to the infected sites. 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. Activation of the CXCL10/CXCR3 axis plays also 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.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

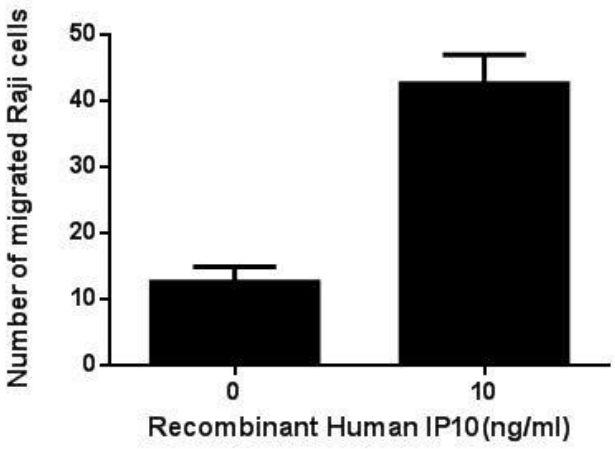
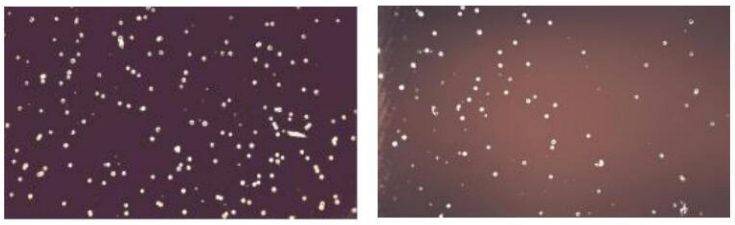


Figure. The binding activity of IP10 with IGFBP7. Interferon gamma-induced protein 10 (IP10) also known as C-X-C motif chemokine 10 (CXCL10) or small-inducible cytokine B10 is an 8.7kDa protein that in humans is encoded by the CXCL10 gene. C-X-C motif chemokine 10 is a small cytokine belonging to the CXC chemokine family. IP10 secreted by several cell types in response to IFN-γ, has been attributed to several roles, such as chemoattraction for monocytes/macrophages, T cells, NK cells, and dendritic cells, promotion of T cell adhesion to endothelial cells, antitumor activity, and inhibition of bone marrow colony formation and angiogenesis. Besides, Insulin Like Growth Factor Binding Protein 7 (IGFBP7) has been identified as an interactor of IP10, thus a binding ELISA assay was conducted to detect the interaction of recombinant human IP10 and recombinant human IGFBP7. Briefly, VDR were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to IGFBP7-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h

with anti-IP10 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of IP10 and IGFBP7 was shown in Figure 1, and this effect was in a dose dependent manner. Figure. The chemotactic effect of IP10 on Raji cells. Chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of IP10 on the Raji cell line. Briefly, Raji cells were seeded into the upper chambers (150μL cell suspension, 106 cells/mL in RPMI 1640 with FBS free) and IP10 (1ng/mL, 10ng/mL ,100ng/mL and 1000ng/mL diluted separately in serum free RPMI 1640) was added in lower chamber with a polycarbonate filter (8μm pore size) used to separate the two compartments. After incubation at 37℃ with 5% CO2 for 2h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification (×100) and the number of migrated cells were counted at high magnification (×400) randomly (five fields for each filter). Result shows IP10 is able to induce migration of Raji cells. The migrated Raji cells in low chamber at low magnification (×100) were shown in Figure 2. Five fields of each chamber were randomly chosen, and the migrated cells were counted at high magnification (×400). Statistical results were shown in Figure 3. The optimum chemotaxis of IP10 occurs at 10-100ng/mL. (A) Raji cells were seeded into the upper chambers and serum free RPMI 1640 with 10ng/mL IP10 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 1h; (B) Raji cells were seeded into the upper chambers and serum free RPMI 1640 without IP10 was added in lower chamber, then cells in lower chamber were observed at low magnification (×100) after incubation for 2h. Figure. The chemotactic effect of IP10 on Raji cells



A B

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.