

## Human CXCL10 / IP10 protein, His tag (active)

Cat. No. GTX00242-pro

Applications Functional Assay

Species Human

Package

10 µg

## Applications

## Application Note

Interferon gamma-induced protein 10 (IP10) also known as C-X-C motif chemokine 10 (CXCL10) or small-inducible cytokine B10 is an 8.7 kDa 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- $\gamma$ , 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 100 µl were then transferred to IGFBP7-coated microtiter wells and incubated for 2h at 37°C. 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°C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of IP10 and IGFBP7 was in a dose dependent manner.

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 (150 µl cell suspension,  $1 \times 10^6$  cells/ml in RPMI-1640 with FBS free) and IP10 (1 ng/ml, 10 ng/ml, 100 ng/ml and 1000 ng/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°C with 5% CO<sub>2</sub> for 2h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification ( $\times 100$ ) and the number of migrated cells were counted at high magnification ( $\times 400$ ) randomly. And IP10 is able to induce migration of Raji cells. The migrated Raji cells in low chamber at low magnification ( $\times 100$ ) randomly, and the migrated cells were counted at high magnification ( $\times 400$ ). The optimum chemotaxis of IP10 occurs at 10-100 ng/ml.

Observed MW (kDa) 13 kDa.

## Properties

Form Lyophilized powder

Buffer Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.

Preservative ProClin 300

Storage For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.

Region/Sequence N-terminal His-Tag; Val22~Pro98 (NP\_001556.2)

Expression System E. coli

Purity &gt; 95%

Endotoxin &lt; 1 EU/µg

Conjugation Unconjugated



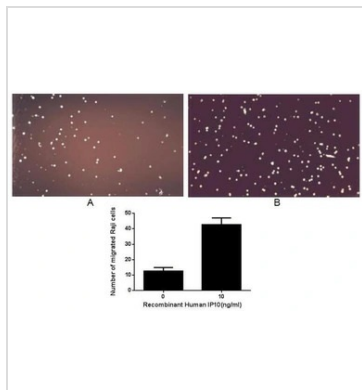
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## Note

For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

## DATA IMAGES



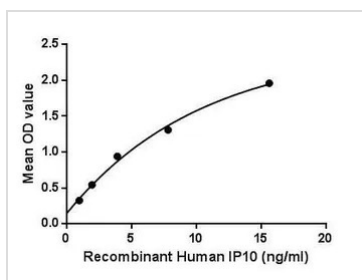
### GTX00242-pro Functional Assay Image

The chemotactic effect of GTX00242-pro Human CXCL10 / IP10 protein (active).

Upper: (A) 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 ( $\times 100$ ) after incubation for 2hrs.

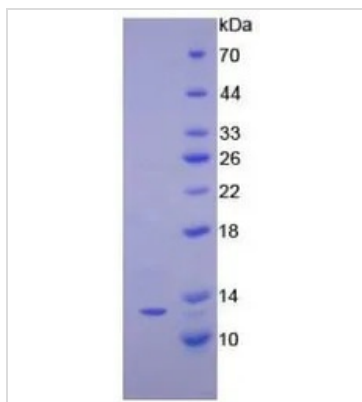
(B) Raji cells were seeded into the upper chambers and serum free RPMI-1640 with 10 ng/ml IP10 was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 100$ ) after incubation for 1hr.

Lower: The number of migrated cells were counted at high magnification ( $\times 400$ ) randomly (five fields for each filter).



### GTX00242-pro Functional Assay Image

Functional ELISA analysis of GTX00242-pro Human CXCL10 / IP10 protein (active) which can bind immobilized IGFBP7 protein.



### GTX00242-pro Image

SDS-PAGE analysis of GTX00242-pro Human CXCL10 / IP10 protein (active).



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