**DESCRIPTION**

**Species Reactivity** Human

**Specificity** Detects human CXCL10/IP-10/CRG-2 in direct ELISAs and Western blots. In direct ELISAs, less than 20% cross-reactivity with recombinant mouse CRG-2 and recombinant rat CRG-2 is observed.

**Source** Polyclonal Goat IgG

**Purification** Antigen Affinity-purified

**Immunogen** E. coli-derived recombinant human CXCL10/IP-10/CRG-2 Val22-Pro98

**Accession #** P02778

**Endotoxin Level** <0.20 EU per 1 μg of the antibody by the LAL method.

**Formulation** Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
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</thead>
<tbody>
<tr>
<td><strong>Immunocytochemistry</strong></td>
<td>5-15 μg/mL</td>
</tr>
<tr>
<td><strong>Immunohistochemistry</strong></td>
<td>1-15 μg/mL</td>
</tr>
</tbody>
</table>

**Intracellular Staining by Flow Cytometry**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human peripheral blood monocytes treated with Recombinant Human IFN-γ (Catalog # 285-IF) &amp; permeabilized with saponin</td>
<td>2.5 µg/10⁶ cells</td>
</tr>
</tbody>
</table>

**CyTOF-ready**

Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.

**Neutralization**

Measured by its ability to neutralize CXCL10/IP-10/CRG-2-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CXCR3. The Neutralization Dose (ND₅₀) is typically 1-4 µg/mL in the presence of 0.2 µg/mL Recombinant Human CXCL10/IP-10/CRG-2.

**ELISA**

This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human CXCL10/IP-10/CRG-2 Monoclonal Antibody (Catalog # MAB2661). This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human CXCL10/IP-10 DuoSet ELISA Kit (Catalog # DY266) for convenient development of a sandwich ELISA or the Human CXCL10/IP-10 Quantikine ELISA Kit (Catalog # DIP100) for a complete optimized ELISA.

**DATA**

**Immunocytochemistry**

CXCL10/IP-10 in Human PBMCs. CXCL10/IP-10 was detected in immersion fixed PHA-treated human peripheral blood mononuclear cells (PBMCs) using 10 µg/mL Goat Anti-Human CXCL10/IP-10 Antibody (Cat# AF-266-NA) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue).

**Immunohistochemistry**

CXCL10/IP-10/CRG-2 in Human Tonsil. CXCL10/IP-10/CRG-2 was detected in immersion fixed paraaffin-embedded sections of human tonsil using Goat Anti-Human CXCL10/IP-10/CRG-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-266-NA) at 1 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.
Neutralization
Chemotaxis Induced by CXCL10/IP-10 and Neutralization by Human CXCL10/IP-10 Antibody.

Recombinant Human CXCL10/IP-10 (Catalog # 266-IP) chemoattracts the BaF3 mouse pro-B cell line transfected with human CXCR3 in a dose-dependent manner (orange line). The amount of cells that migrated through to the lower chemotaxis chamber was measured by Resazurin (Catalog # AR002). Chemotaxis elicited by Recombinant Human CXCL10/IP-10 (0.2 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human CXCL10/IP-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-266-NA). The ND_{50} is typically 1-4 µg/mL.

ELISA
Human CXCL10/IP-10/CRG-2 ELISA Standard Curve. Recombinant Human CXCL10/IP-10/CRG-2 protein was serially diluted 2-fold and captured by Mouse Anti-Human CXCL10/IP-10/CRG-2 Monoclonal Antibody (Catalog # MAB2661) coated on a Clear Polystyrene Microplate (Catalog # DY990). Goat Anti-Human CXCL10/IP-10/CRG-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-266-NA) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

PREPARATION AND STORAGE
Reconstitution
Reconstitute at 0.2 mg/mL in sterile PBS.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

Stability & Storage
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND
CXCL10 was originally identified as an IFN-γ-inducible gene in monocytes, fibroblasts, and endothelial cells. It has since been shown that CXCL10 mRNA is also induced by LPS, IL-1β, TNF-α, IL-12, and viruses. Additional cell types that have been shown to express CXCL10 include activated T-lymphocytes, splenocytes, keratinocytes, osteoblasts, astrocytes, and smooth muscle cells. CXCL10 is also expressed in psoriatic and lepromatous lesions of skin. The mouse homologue of human CXCL10, CRG-2, has been cloned and shown to share approximately 67% amino acid sequence identity with human CXCL10. Human CXCL10 cDNA encodes a 98 amino acid (aa) residue precursor protein with a 21 aa residue signal peptide that is cleaved to form the 77 aa residue secreted protein. The amino acid sequence of CXCL10 identified the protein as a member of the chemokine α subfamily that lacks the ELR domain. CXCL10 has been shown to be a chemoattractant for activated T-lymphocytes. CXCL10 has been reported to be a potent inhibitor of angiogenesis and to display a potent thymus-dependent antitumor effect. A chemokine receptor specific for CXCL10 and MIG has been cloned and shown to be highly expressed in IL-2-activated T-lymphocytes.

References: