Human CXCL10/IP-10/CRG-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-266-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CXCL10/IP-10/CRG-2 in direct ELISAs and Western blots.
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.

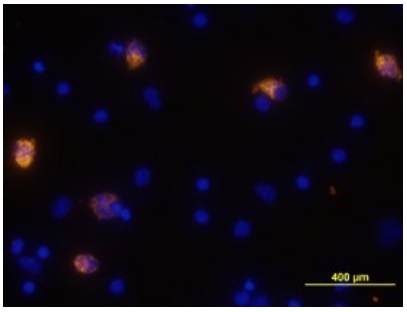
APPLICATIONS

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.*

	Recommended Concentration	Sample
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	1-15 µg/mL	See Below
Intracellular Staining by Flow Cytometry	2.5 µg/10^6 cells	Human peripheral blood monocytes treated with Recombinant Human IFN-γ (Catalog # 285-IF), fixed with paraformaldehyde, and permeabilized with saponin
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 (ND_{50}) 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.*	

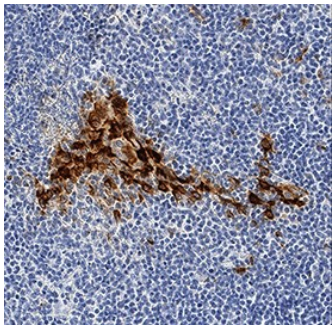
DATA

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 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-266-NA) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunohistochemistry



CXCL10/IP-10/CRG-2 in Human Tonsil. CXCL10/IP-10/CRG-2 was detected in immersion fixed paraffin-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 # 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.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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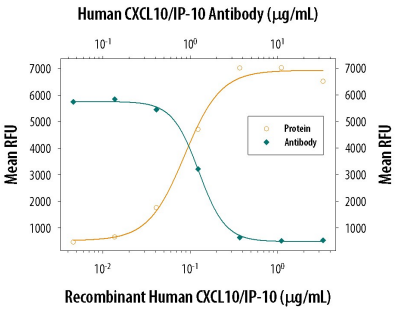
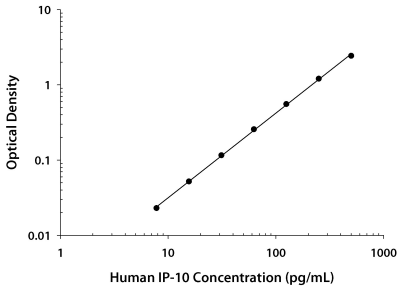
Neutralization



Chemotaxis Induced by CXCL10/IP-10 and Neutralization by Human CXCL10/IP-10 Antibody. Recombinant Human CXCL10/IP-10 (Catalog # 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 # 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 # Catalog # MAB2661) coated on a Clear Polystyrene Microplate (Catalog # 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 # Catalog # DY998) followed by Substrate Solution (Catalog # Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # 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:

1. Loetscher, M. *et al.* (1996) J. Exp. Med. **184**:963.
2. Wang, X. *et al* .(1996) J. Biol. Chem. **271**:24286.

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