Human IL-10 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-217-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-10 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant Epstein-Barr virus IL-10 is observed and less than 20% cross-reactivity with recombinant mouse IL-10, recombinant feline IL-10, recombinant porcine IL-10, recombinant equine IL-10, and recombinant rat IL-10 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human IL-10 Ser19-Asn178 Accession # P22301
Endotoxin Level	<0.10 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 as a 0.2 µm filtered solution in PBS.

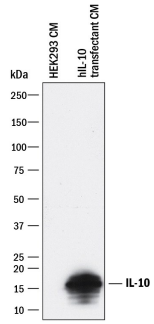
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	10 µg/mL	See Below
Neutralization	Measured by its ability to neutralize IL-10-induced proliferation in the MC/9-2 mouse mast cell line. The Neutralization Dose (ND_{50}) is typically 0.2-1.0 µg/mL in the presence of 5 ng/mL Recombinant Human IL-10.	

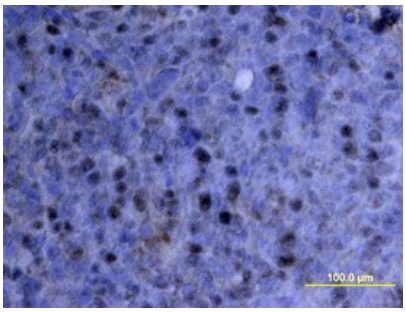
DATA

Western Blot



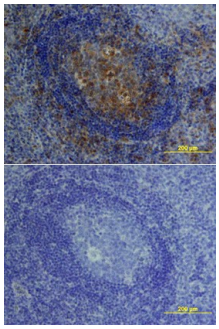
Detection of Human IL-10 by Western Blot. Western blot shows conditioned media of HEK293 human embryonic kidney cell line either mock transfected or transfected with human IL-10. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for IL-10 at approximately 16 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



IL-10 in Human Tonsil. IL-10 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunohistochemistry



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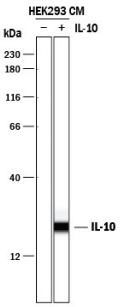
Simple Western



Detection of Human IL-10 by Simple Western™. Simple Western lane view shows conditioned media of HEK293 human embryonic kidney cell line either mock transfected or transfected with human IL-10, loaded at 0.2 mg/mL. A specific band was detected for IL-10 at approximately 23 kDa (as indicated) using 10 µg/mL of Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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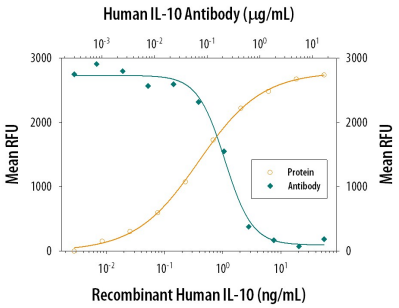
Neutralization



Cell Proliferation Induced by IL-10 and Neutralization by Human IL-10 Antibody. Recombinant Human IL-10 (Catalog # 217-IL) stimulates proliferation in the MC/9-2 mouse mast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IL-10 (5 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-217-NA). The ND_{50} is typically 0.2-1.0 µg/mL.

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

Interleukin 10, also known as cytokine synthesis inhibitory factor (CSIF), is the charter member of the IL-10 family of α-helical cytokines that also includes IL-19, IL-20, IL-22, IL-24, and IL-26/AK155 (1, 2). IL-10 is secreted by many activated hematopoietic cell types as well as hepatic stellate cells, keratinocytes, and placental cytotrophoblasts (2-5). Mature human IL-10 shares 72%-86% amino acid sequence identity with bovine, canine, equine, feline, mouse, ovine, porcine, and rat IL-10. Whereas human IL-10 is active on mouse cells, mouse IL-10 does not act on human cells (6, 7). IL-10 is a 178 amino acid molecule that contains two intrachain disulfide bridges and is expressed as a 36 kDa noncovalently associated homodimer (6, 8, 9). The IL-10 dimer binds to two IL-10 Rα/IL-10 R1 chains, resulting in recruitment of two IL-10 Rβ/IL-10 R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3 (10). IL-10 Rβ does not bind IL-10 by itself but is required for signal transduction (1). IL-10 Rβ also associates with IL-20 Rα, IL-22 Rα, or IL-28 Rα to form the receptor complexes for IL-22, IL-26, IL-28, and IL-29 (11-13). IL-10 is a critical molecule in the control of viral infections and allergic and autoimmune inflammation (14-16). It promotes phagocytic uptake and Th2 responses but suppresses antigen presentation and Th1 proinflammatory responses (2).

References:

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