

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human IL-10 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant equine IL-10, recombinant canine IL-10, recombinant porcine IL-10, and recombinant feline IL-10 is observed, and less than 10% cross-reactivity with recombinant mouse IL-10, recombinant rat IL-10, and recombinant cotton rat IL-10 is observed.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	<i>S. frugiperda</i> 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.

APPLICATIONS	
Please Note: Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.	
	Recommended Concentration Sample
Western Blot	1 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 [Thompson-Snipes, L. <i>et al.</i> (1991) <i>J. Exp. Med.</i> 173 :507]. The Neutralization Dose (ND ₅₀) is typically 3-15 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 Polyclonal Antibody (Catalog # AB-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.

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 Polyclonal Antibody (Catalog # AB-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.

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 Polyclonal Antibody (Catalog # AB-217-NA). The ND₅₀ is typically 3-15 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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 R α /IL-10 R1 chains, resulting in recruitment of two IL-10 R β /IL-10 R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3 (10). IL-10 R β does not bind IL-10 by itself but is required for signal transduction (1). IL-10 R β also associates with IL-20 R α , IL-22 R α , or IL-28 R α 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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