

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-10 in direct ELISAs and Western blots. In direct ELISAs, approximately 30% cross-reactivity with recombinant rat IL-10 and recombinant cotton rat IL-10 is observed, and less than 5% cross-reactivity with recombinant porcine IL-10, recombinant canine IL-10, recombinant feline IL-10, recombinant equine IL-10, recombinant viral IL-10, recombinant guinea pig IL-10, and recombinant human IL-10 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-10 Ser19-Ser178 Accession # NP_034678
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 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
Western Blot	0.1 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 0.01-0.05 µg/mL in the presence of 2.5 ng/mL Recombinant Mouse IL-10.	

DATA

Western Blot

Detection of Recombinant Mouse IL-10 by Western Blot. Western blot shows 25 ng of Recombinant Mouse IL-10 (Catalog # 417-ML), Recombinant Human IL-10 (Catalog # 217-IL), Recombinant Rat IL-10 (Catalog # 522-RLB), and Recombinant Human IL-26/AK155 Monomer (Catalog # 1375-IL). PVDF Membrane was probed with 0.1 µg/mL of Goat Anti-Mouse IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-417-NA) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). 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 3.

Neutralization

Cell Proliferation Induced by IL-10 and Neutralization by Mouse IL-10 Antibody. Recombinant Mouse IL-10 (Catalog # 417-ML) stimulates proliferation in the MC/9-2 mouse mast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse IL-10 (2.5 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-417-NA). The ND₅₀ is typically 0.01-0.05 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. <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, and IL-24. IL-10 is secreted by many activated hematopoietic cell types as well as hepatic stellate cells, keratinocytes, and placental cytotrophoblasts. Mature mouse IL-10 shares 85% amino acid sequence identity with rat and 70%-77% with bovine, canine, equine, feline, human, ovine, and porcine IL-10. Whereas human IL-10 is active on mouse cells, mouse IL-10 does not act on human cells. IL-10 is a 178 amino acid molecule that contains two intrachain disulfide bridges and is expressed as a 36 kDa noncovalently associated homodimer. 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. IL-10 Rβ does not bind IL-10 by itself but is required for signal transduction. 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. IL-10 is a critical molecule in the control of viral infections and allergic and autoimmune inflammation. It promotes phagocytic uptake and Th2 responses but suppresses antigen presentation and Th1 proinflammatory responses.