Mouse/Rat IL-10 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF519

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat IL-10 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 10% cross-reactivity with recombinant human IL-10 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant rat IL-10 Ser19-Asn178 Accession # P29456
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.

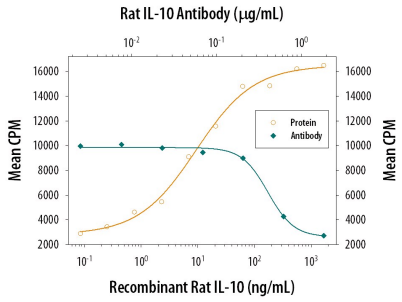
APPLICATIONS

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

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Rat IL-10 (Catalog # 522-RL)
Immunocytochemistry	5-15 µg/mL	Immersion fixed rat splenocytes
Neutralization	Measured by its ability to neutralize IL-10-induced proliferation in the MC/9-2 mouse mast cell line. Thompson-Snipes, L. *et al.* (1991) J. Exp. Med. **173**:507. The Neutralization Dose (ND_{50}) is typically 0.3-1.0 µg/mL in the presence of 40 ng/mL Recombinant Rat IL-10.	

DATA

Neutralization



Cell Proliferation Induced by IL-10 and Neutralization by Rat IL-10 Antibody. Recombinant Rat IL-10 (Catalog # 522-RL) stimulates proliferation in the MC/9-2 mouse mast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Rat IL-10 (40 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Rat IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF519). The ND_{50} is typically 0.3-1.0 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.
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.

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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 (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 rat IL-10 shares 85% amino acid sequence identity with mouse and 71%-79% amino acid sequence identity 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 (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 (8-10). The IL-10 dimer binds to two IL-10 Rα/IL-10 R1 chains, resulting in recruitment of two IL-10 Rβ/IL-10R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3 (11). 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 (12-14). IL-10 is a critical molecule in the control of viral infections and allergic and autoimmune inflammation (15-17). It promotes phagocytic uptake and Th2 responses but suppresses antigen presentation and Th1 proinflammatory responses (2).

References:

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