Equine IL-10 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1605

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-10 in ELISAs and Western blots. In sandwich immunoassays, less than 1% cross-reactivity with recombinant canine IL-10 and recombinant porcine IL-10 is observed and less than 0.4% cross-reactivity with recombinant human IL-10, recombinant mouse IL-10, recombinant rat IL-10, and recombinant feline IL-10 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant equine IL-10 Ser19-Asn178 Accession # Q28374
Endotoxin Level	<0.15 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.

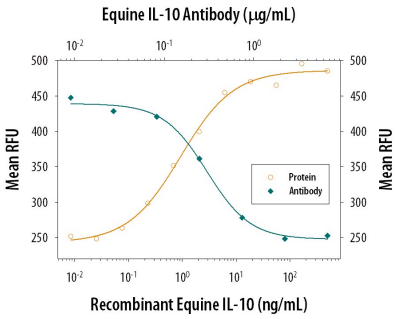
APPLICATIONS

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 Equine IL-10 (Catalog # 1605-IL)
Immunocytochemistry	5-15 µg/mL	Immersion fixed equine peripheral blood mononuclear cells
Equine IL-10 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Equine IL-10 Antibody (Catalog # AF1605)
ELISA Detection	0.1-0.4 µg/mL	Equine IL-10 Biotinylated Antibody (Catalog # BAF1605)
Standard		Recombinant Equine IL-10 (Catalog # 1605-IL)
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 0.2-0.6 µg/mL in the presence of 20 ng/mL Recombinant Equine IL-10.	

DATA

Neutralization



Cell Proliferation Induced by IL-10 and Neutralization by Equine IL-10 Antibody. Recombinant Equine IL-10 (Catalog # 1605-IL) stimulates proliferation in the MC/9-2 mouse mast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Equine IL-10 (20 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Equine IL-10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1605). The ND_{50} is typically 0.2-0.6 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 (IL-10), initially designated cytokine synthesis inhibitory factor (CSIF), was originally identified as a product of mouse T helper 2 (Th2) cells that inhibited the cytokine production by Th1 cells. It is a pleiotropic cytokine that regulates the immune and inflammatory responses of hematopoietic cells (1, 2). IL-10 has immunosuppressive activities and has been shown to inhibit the effector functions of monocyte/macrophage and $CD4^+$ T cells. Conversely, IL-10 has immunostimulatory activities and can induce the proliferation and cytotoxic activity of $CD8^+$ T cells and NK cells. IL-10 also regulates the growth and differentiation of B cells, mast cells, dendritic cells and neutrophils (1). The biological activities of IL-10 is mediated by the heteromeric IL-10 receptor complex, which is composed of the ligand-binding IL-10Rα and the accessory IL-10Rβ subunits. Both subunits belong to the class II cytokine receptor family. IL-10Rβ is also utilized as a subunit in the heterodimer receptor complex for IL-22, IL-28 and IL-29. Besides IL-10, five novel cytokines (IL-19, -20, -22, -24, and -26) that share structural and limited sequence homology with IL-10 have been identified. These proteins constitute the IL-10 cytokine family (3).

Equine IL-10 cDNA encodes a 178 amino acid residue (aa) precursor protein with an 18 aa signal peptide and 160 aa mature protein that contains two potential N-linked glycosylation sites. Analogous to human IL-10, equine IL-10 likely exists as nondisulfide-linked homodimers. Equine IL-10 shares 71% and 78% aa sequence homology with mouse and human IL-10, respectively.

References:

1. Moore, K. *et al.* (2001) Annu. Rev. Immunol. **19**:683.
2. Mocellin, S. *et al.* (2003) Trends in Immunol. **23**:36.
3. Conti, P. *et al.* (2003) Immunol. Letters **88**:171.