Equine IL-4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1809

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-4 in ELISAs and Western blots. In sandwich ELISAs, less than 0.7% cross-reactivity with recombinant human IL-4, recombinant mouse IL-4, recombinant rat IL-4, recombinant cotton rat IL-4, recombinant canine IL-4, recombinant feline IL-4, recombinant porcine IL-4, recombinant bovine IL-4, and recombinant rhesus macaque IL-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant equine IL-4 Lys26-Cys137 Accession # NP_001075988
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

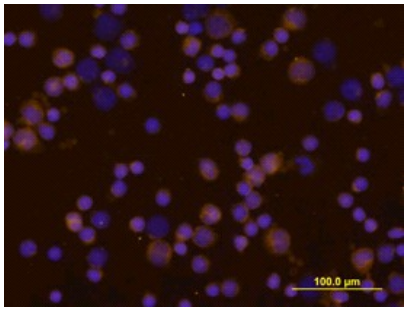
APPLICATIONS

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-4 (Catalog # 1809-EL)
Immunocytochemistry	5-15 µg/mL	See Below
Equine IL-4 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Equine IL-4 Antibody (Catalog # AF1809)
ELISA Detection	0.1-0.4 µg/mL	Equine IL-4 Biotinylated Antibody (Catalog # BAF1809)
Standard		Recombinant Equine IL-4 (Catalog # 1809-EL)

DATA

Immunocytochemistry



IL-4 in Equine PBMCs. IL-4 was detected in immersion fixed equine peripheral blood mononuclear cells (PBMCs) using Goat Anti-Equine IL-4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1809) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (yellow; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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-4 (IL-4), also known as B cell-stimulatory factor-1, is a monomeric, approximately 13-18 kDa Th2 cytokine that shows pleiotropic effects during immune responses (1-3). It is a glycosylated polypeptide that contains three intrachain disulfide bridges and adopts a bundled four α-helix structure (4). Equine IL-4 is synthesized with a 24 amino acid (aa) signal sequence. Mature equine IL-4 shares 53-60% aa sequence identity with bovine, goat, human, ovine, and porcine IL-4 and 38-40% aa sequence identity with mouse and rat IL-4. IL-4 exerts its effects through two receptor complexes (5, 6). The type I receptor, which is expressed on hematopoietic cells, is a heterodimer of the ligand binding IL-4 Rα and the common γ chain (a shared subunit of the receptors for IL-2, -7, -9, -15, and -21). The type II receptor on non-hematopoietic cells consists of IL-4 Rα and IL-13 Rα1. The type II receptor also transduces IL-13 mediated signals. IL-4 is primarily expressed by Th2-biased $CD4^+$ T cells, mast cells, basophils, and eosinophils (1, 2). It promotes cell proliferation, survival, and immunoglobulin class switch to IgE in B cells, acquisition of the Th2 phenotype by naïve $CD4^+$ T cells, priming and chemotaxis of mast cells, eosinophils, and basophils, and the proliferation and activation of epithelial cells (7-10). IL-4 plays a dominant role in the development of allergic inflammation and asthma (9, 11).

References:

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