Equine IL-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1613

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-2 in ELISAs and Western blots. In sandwich immunoassays, less than 0.3% cross-reactivity with recombinant human IL-2, recombinant mouse IL-2, recombinant rat IL-2, recombinant feline IL-2, recombinant bovine IL-2, recombinant canine IL-2, recombinant cotton rat IL-2, and recombinant porcine IL-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant equine IL-2 Ala21-Thr149 (Cys141Ser) Accession # NP_001078902.1
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.

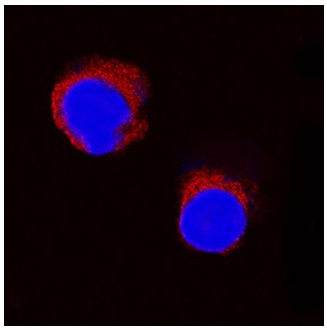
APPLICATIONS

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	Recombinant Equine IL-2 (Cys141Ser) (Catalog # 1613-IL)
Immunocytochemistry	5-15 µg/mL	See Below
Equine IL-2 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Equine IL-2 Antibody (Catalog # AF1613)
ELISA Detection	0.1-0.4 Not Assigned	Equine IL-2 Biotinylated Antibody (Catalog # BAF1613)
Standard		Recombinant Equine IL-2 (Cys141Ser) (Catalog # 1613-IL)

DATA

Immunocytochemistry



IL-2 in Equine PBMCs. IL-2 was detected in immersion fixed equine peripheral blood mononuclear cells (PBMCs) using Goat Anti-Equine IL-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1613) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. 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. *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.** ● 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 2 was initially identified as a T cell growth factor that is produced by T cells following activation by mitogens or antigens (1). IL-2 has since been found to also stimulate the growth and differentiation of B cells, natural killer (NK) cells, lymphocyte activated killer (LAK) cells, monocytes/macrophages and oligodendrocytes (2).

The biological activity of IL-2 is mediated by the binding of IL-2 to cell surface receptor complexes. The functional high-affinity receptor that mediate IL-2 signals is composed of three polypeptide chains, the IL-2 receptor α, β and γ subunits (3). IL-2 also signals via the intermediate affinity receptor complex of the β and γ subunits (4). In T cells, the β and γ subunits are shared with the IL-15 receptor complex (5). The γ subunit of the IL-2 receptor complex has also been shown to be a subunit of the receptor complexes of IL-4, IL-7, IL-9 and IL-21 (6).

At the amino acid sequence level, equine IL-2 shares 72%, 70%, 56% and 54% sequence similarities with human, porcine, rat and mouse IL-2, respectively. It has been reported that equine IL-2 augmented proliferation in equine peripheral blood mononuclear cells, but has no effect on mouse CTLL-2 cells (7).

References:

1. Morgan, D.A. *et al.* (1976) Science **193**:1007.
2. Smith, K.A. *et al.* (1988) Science **240**:1169.
3. Taniguchi, T. and Y. Minami (1993) Cell **73**:5.
4. Giri, J. *et al.* (1994) EMBO J. **13**:2822.
5. Waldmann, T. *et al.* (1998) Int. Rev. Immunol. **16**:205.
6. Nelson, B.H. and D.M. Willeford (1998) Adv. Immunol. **70**:1.
7. E.V. Vandergrift and D.W. Horohov (1993) Vet. Immunol. Immunopathol. **39**:395.

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