

#### DESCRIPTION

<b>Species Reactivity</b>	Equine
<b>Specificity</b>	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.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant equine IL-2 Ala21-Thr149 (Cys141Ser) Accession # NP_001078902.1
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

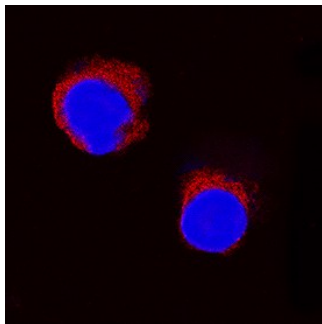
#### APPLICATIONS

**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.

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

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### 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  $\alpha$ ,  $\beta$  and  $\gamma$  subunits (3). IL-2 also signals via the intermediate affinity receptor complex of the  $\beta$  and  $\gamma$  subunits (4). In T cells, the  $\beta$  and  $\gamma$  subunits are shared with the IL-15 receptor complex (5). The  $\gamma$  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.