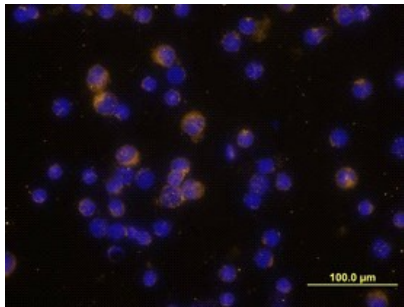


DESCRIPTION	
<b>Species Reactivity</b>	Feline
<b>Specificity</b>	Detects feline IL-2 in ELISAs and Western blots. In sandwich immunoassays, approximately 3% cross-reactivity with recombinant canine IL-2 is observed, approximately 1% cross-reactivity with recombinant porcine IL-2 and recombinant human IL-2 is observed, and less than 0.2% cross-reactivity with recombinant mouse IL-2, recombinant equine IL-2, recombinant bovine IL-2, recombinant rat IL-2, and recombinant cotton rat 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 feline IL-2 Ala21-Thr154 (Cys146Ser) Accession # Q07885
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS		
<i>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.</i>		
	Recommended Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	Recombinant Feline IL-2 (Cys146Ser) (Catalog # 1890-FL)
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Feline IL-2 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	0.2-0.8 µg/mL	Feline IL-2 Antibody (Catalog # AF1890)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Feline IL-2 Biotinylated Antibody (Catalog # BAF1890)
<b>Standard</b>		Recombinant Feline IL-2 (Cys146Ser) (Catalog # 1890-FL)

DATA	
<p><b>Immunocytochemistry</b></p> 	<p><b>IL-2 in Feline PBMCs.</b> IL-2 was detected in immersion fixed feline peripheral blood mononuclear cells (PBMCs) using Goat Anti-Feline IL-2 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1890) 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 <a href="#">Fluorescent ICC Staining of Non-adherent Cells</a>.</p>

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.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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 (IL-2) is a secreted, single chain  $\alpha$ -helical polypeptide that has potent stimulatory activity for antigen-activated T cells. The feline IL-2 gene encodes a 154 amino acid (aa) precursor protein with a 20 aa signal peptide plus a 134 aa mature segment. There are suggestions that the mature protein may be O-glycosylated. At the aa sequence level, mature feline IL-2 is 78%, 82%, 60%, 64%, 62%, 75%, 62%, and 76% identical to mature human, canine, mouse, rat, cotton rat, porcine, goat, and equine IL-2, respectively. Mammalian cells known to express IL-2 include CD4<sup>+</sup> and CD8<sup>+</sup> T cells, visceral smooth muscle cells, eosinophils,  $\gamma\delta$  T cells, B cells and dendritic cells. The biological activity of IL-2 is mediated by IL-2 receptor complexes consisting of three distinct subunits ( $\alpha$ ,  $\beta$ ,  $\gamma$ ) in two combinations. The high-affinity signaling IL-2 receptor complex is a heterotrimer of the IL-2 receptor  $\alpha$ ,  $\beta$ ,  $\gamma$  subunits. The intermediate signaling complex is a heterodimer of the IL-2 R $\beta$  and  $\gamma$  subunits. The non-ligand binding  $\gamma$  subunit, referred to as the common  $\gamma$  subunit ( $\gamma_c$ ), is also a subunit of the receptor complexes of IL-4, IL-7, IL-9 and IL-15. Functionally, IL-2 is best known for its autocrine and paracrine activity on T cells. On naïve CD8<sup>+</sup> T cells, high IL-2 levels can induce cell proliferation with a bias towards cytotoxicity. In the presence of low levels of IL-2, CD8<sup>+</sup> T cells preferentially undergo apoptosis with a bias towards cytokine secretion. IL-2 also seems to play a central role in the expansion and maintenance of CD4<sup>+</sup> CD25<sup>+</sup> regulatory T cells. This indicates IL-2 may be a key cytokine in the natural suppression of autoimmunity (1-9).

**References:**

1. Cozzi, P.J. *et al.* (1993) *Biochem. Biophys. Res. Commun.* **194**:1038.
2. Smith, K.A. (1992) *Curr. Opin. Immunol.* **4**:271.
3. Conradt, H.S. *et al.* (1989) *J. Biol. Chem.* **264**:17368.
4. Matesanz, F. *et al.* (1993) *Immunogenetics* **38**:300.
5. Ellery, J.M. and P.J. Nicholls (2002) *Cytokine Growth Factor Rev.* **13**:27.
6. Liparoto, S.F. *et al.* (2002) *Biochemistry* **41**:2543.
7. Lin, J-X. and W.J. Leonard (1997) *Cytokine Growth Factor Rev.* **8**:313.
8. Sad, S. and L. Krishnan (1999) *J. Immunol.* **163**:2443.
9. Malek, T.R. (2003) *J. Leukoc. Biol.* **74**:961.