

**DESCRIPTION**

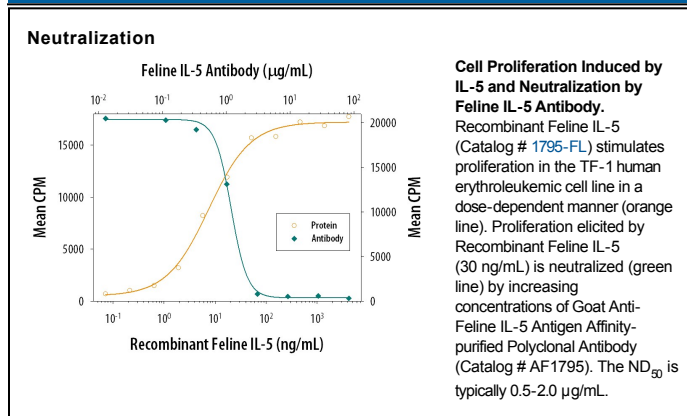
<b>Species Reactivity</b>	Feline
<b>Specificity</b>	Detects feline IL-5 in direct ELISAs and Western blots. In direct ELISAs, approximately 80% cross-reactivity with recombinant bovine IL-5 and recombinant equine IL-5 is observed, approximately 50% cross-reactivity with recombinant porcine IL-5 and recombinant canine IL-5 is observed, approximately 10% cross-reactivity with recombinant human IL-5 is observed, and less than 1% cross-reactivity with recombinant rat IL-5, recombinant mouse IL-5, and recombinant rhesus monkey IL-5 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant feline IL-5 Ile20-Ser134 Accession # O77515
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<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 Feline IL-5 (Catalog # 1795-FL)
<b>Immunocytochemistry</b>	5-15 µg/mL	Immersion fixed feline peripheral blood mononuclear cells
<b>Neutralization</b>	Measured by its ability to neutralize IL-5-induced proliferation in the TF-1 human erythroleukemic cell line. Kitamura, T. <i>et al.</i> (1989) <i>J. Cell Physiol.</i> <b>140</b> :323. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.5-2.0 µg/mL in the presence of 30 ng/mL Recombinant Feline IL-5.	

**DATA**



**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 5 (IL-5) is a T cell-derived factor that promotes the proliferation, differentiation and activation of eosinophils. In mice, IL-5 is also a growth and differentiation factor for B cells (1-3). Various names previously used to describe IL-5 include: T cell replacing factor (TRF), B cell growth factor II (BCGFII), B cell differentiation factor  $\mu$  (BCDF  $\mu$ ), eosinophil differentiation factor (EDF) and eosinophil colony-stimulating factor ( $E_o$ -CSF). Biologically active IL-5 is a disulfide-linked homodimer. As in human IL-5, the cDNA for cat IL-5 encodes a precursor protein with signal peptide that is cleaved to generate the secreted mature protein containing 115 amino acid (aa) residues. Feline IL-5 shares 70% and 59% aa sequence identity with human and mouse IL-5, respectively. IL-5 exerts its activity on target cells by binding to specific cell surface receptor complexes. The functional high-affinity receptor complex for IL-5 is composed of a ligand-binding  $\alpha$  subunit that is specific for IL-5, and a non ligand-binding common  $\beta$  subunit that is required for signal transduction. The common  $\beta$  subunit is shared with the high-affinity receptor complexes for IL-3 and GM-CSF. In human, IL-5 R $\alpha$  subunit is primarily expressed on eosinophils and basophils. During eosinophil development, IL-5 up-regulates the expression of IL-5 R $\alpha$ . In contrast, in mature eosinophils, the expression of IL-5 R $\alpha$  mRNA is down-regulated by IL-5, as well as by IL-3 and GM-CSF. Furthermore, IL-5 also down-modulates cell surface IL-5 R $\alpha$  via a proteinase-mediated process that releases the soluble IL-5 R $\alpha$  extracellular domain (4-6).

#### References:

1. Karlen, S. *et al.* (1998) *Int. Rev. Immunol.* **16**:227.
2. Lalani, T. *et al.* (1999) *Ann. Allergy Asthma Immunol.* **82**:317.
3. Takatsu, K. (1998) *Cytokine Growth Factor Rev.* **9**:25.
4. Gregory, B. *et al.* (2003) *J. Immunol.* **170**:5359.
5. Hellman, C. *et al.* (2003) *Clin. Exp. Immunol.* **131**:75.
6. Liu, L.Y. *et al.* (2002) *J. Immunol.* **169**:6459.