Feline IL-5 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1795

DESCRIPTION

Species Reactivity	Feline
Specificity	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 recombininat 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.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant feline IL-5 Ile20-Ser134 Accession # O77515
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

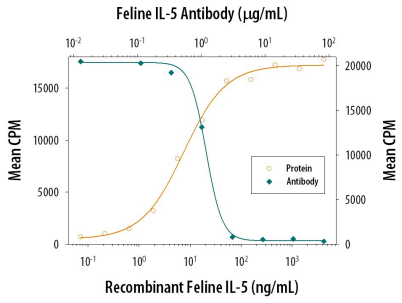
APPLICATIONS

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 Feline IL-5 (Catalog # 1795-FL)
Immunocytochemistry	5-15 µg/mL	Immersion fixed feline peripheral blood mononuclear cells
Neutralization	Measured by its ability to neutralize IL-5-induced proliferation in the TF-1 human erythroleukemic cell line. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323. The Neutralization Dose (ND_{50}) is typically 0.5-2.0 µg/mL in the presence of 30 ng/mL Recombinant Feline IL-5.	

DATA

Neutralization



Cell Proliferation Induced by IL-5 and Neutralization by Feline IL-5 Antibody. Recombinant Feline IL-5 (Catalog # 1795-FL) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Feline IL-5 (30 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Feline IL-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1795). The ND_{50} is typically 0.5-2.0 µg/mL.

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 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 µ (BCDF µ), 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 α subunit that is specific for IL-5, and a non ligand-binding common β subunit that is required for signal transduction. The common β subunit is shared with the high-affinity receptor complexes for IL-3 and GM-CSF. In human, IL-5 Rα subunit is primarily expressed on eosinophils and basophils. During eosinophil development, IL-5 up-regulates the expression of IL-5 Rα. In contrast, in mature eosinophils, the expression of IL-5 Rα 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 Rα via a proteinase-mediated process that releases the soluble IL-5 Rα 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.