

DESCRIPTION

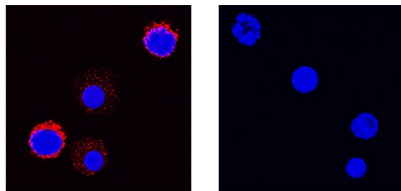
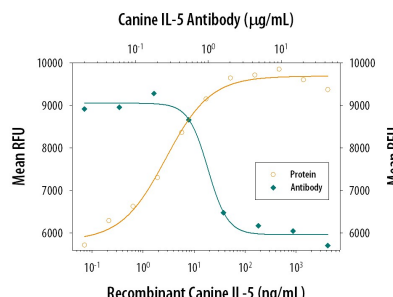
Species Reactivity	Canine
Specificity	Detects canine IL-5 in direct ELISAs and Western blots. In Western blots, approximately 15% cross-reactivity with recombinant bovine IL-5, recombinant equine IL-5, and recombinant feline IL-5 is observed and less than 5% cross-reactivity with recombinant rat IL-5, recombinant mouse IL-5, and recombinant human IL-5 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant canine IL-5 Phe20-Ser134 Accession # Q95J76
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. *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 Canine IL-5 (Catalog # 1964-CL)
Immunocytochemistry	5-15 µg/mL	See Below
Neutralization	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> 140 :323. The Neutralization Dose (ND ₅₀) is typically 0.75-3.0 µg/mL in the presence of 30 ng/mL Recombinant Canine IL-5.	

DATA

<p>Immunocytochemistry</p>  <p>Treated Untreated (control)</p>	<p>IL-5 in Canine PBMCs. IL-5 was detected in immersion fixed canine peripheral blood mononuclear cells (PBMCs) treated with calcium ionomycin and PMA using Goat Anti-Canine IL-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1964) 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 cell surface. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p>	<p>Neutralization</p>  <p>Canine IL-5 Antibody (µg/mL)</p> <p>Mean RFU</p> <p>Recombinant Canine IL-5 (ng/mL)</p> <p>Legend: Protein (orange circles), Antibody (green diamonds)</p>	<p>Cell Proliferation Induced by IL-5 and Neutralization by Canine IL-5 Antibody. Recombinant Canine IL-5 (Catalog # 1964-CL) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Canine IL-5 (30 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Canine IL-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1964). The ND₅₀ is typically 0.75-3.0 µg/mL.</p>
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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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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.

BACKGROUND

Interleukin-5 (IL-5) is a 40-45 kDa secreted disulfide-linked homodimeric glycoprotein that plays an important role in the differentiation, growth, and function of eosinophils. It also primes basophils for histamine and leukotriene release. In mice, IL-5 also induces the proliferation, differentiation, and immunoglobulin production of B cells especially B-1 cells that constitutively express IL-5 receptor α . IL-5 is primarily produced by CD4⁺ Th2 cells. Other cell types, including mast cells, visceral smooth muscle cells, bronchial epithelium, CD16⁺ NK cells, eosinophils and $\gamma\delta$ T cells, can also produce IL-5. Canine IL-5 is synthesized as a 134 amino acid (aa) precursor that contains a 21 aa signal sequence and a 113 aa mature segment. Mature canine IL-5 shares 62%, 66%, 85%, 84%, 58%, and 56% aa sequence identity with mature human, guinea pig, porcine, feline, mouse, and rat IL-5, respectively. The receptor for IL-5 consists of a 60 kDa ligand-binding subunit (IL-5 R α) and a 120 kDa signal-transducing subunit (β_c) (1-7).

References:

1. Lalani, T. *et al.* (1999) *Ann. Allergy Asthma Immunol.* **82**:317.
2. Karlen, S. *et al.* (1998) *Intern. Rev. Immunol.* **16**:227.
3. Takatsu, K. (1998) *Cytokine Growth Factor Rev.* **9**:25.
4. Zabeau, L. *et al.* (2003) *Curr. Drug Targets Inflamm. Allergy* **2**:319.
5. Yang, S. *et al.* (2001) *J. Interferon Cytokine Res.* **21**:361.
6. Jans, D.A. and G. Hassan (1998) *BioEssays* **20**:400.
7. Geijsen, N. *et al.* (2001) *Cytokine Growth Factor Rev.* **12**:19.