

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-5 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant equine IL-5 Leu20-Gly134 Accession # O02699
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Interleukin-5 (IL-5) is a 40 kDa, secreted, heparin-binding, disulfide-linked homodimeric glycoprotein that belongs to the α -helical group of cytokines (1-3). IL-5 is primarily produced by CD4⁺ Th2 cells, but other cell types such as eosinophils, endothelial cells, mast cells, visceral (airway) smooth muscle cells, bronchial epithelium, CD16⁺ NK cells and $\gamma\delta$ T cells can also produce IL-5. Equine IL-5 is synthesized as a 134 amino acid (aa) precursor that contains a 19 aa signal sequence and a 115 aa mature segment. There are four α -helices, two potential N-linked glycosylation sites, and two cysteines that form interchain disulfide bonds with a second, antiparallel IL-5 molecule (3, 4). While human and mouse IL-5 have a potential NLS in their sequence, it is unclear if equine IL-5 has such a sequence. Mature horse IL-5 shares 71%, 89%, 88%, 83%, 66% and 63% aa sequence identity with mature human, bovine, feline, canine, 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). It is suggested that dimeric IL-5 binding to IL-5 R α recruits β_c , which subsequently covalently links with IL-5 R α . This trimeric complex then associates with another trimeric complex to form the physiologic IL-5 receptor (6). Following binding, IL-5 has targeted effects. It promotes the maturation and migration of eosinophils, partially through the effects of eotaxin. It mobilizes eosinophils and CD34⁺ progenitors from marrow. It also enhances Ig release from B cells and contributes to IL-4 production. Finally, it primes basophils for histamine and leukotriene release (1, 2, 7).

PRODUCT SPECIFIC NOTICES

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