

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Porcine                                                                                                                                                                                                                                                                     |
| <b>Specificity</b>        | Detects porcine IL-5 in direct ELISAs and Western blots. In direct ELISAs, less than 30% cross-reactivity with recombinant canine IL-5 and less than 10% cross-reactivity with recombinant human IL-5, recombinant mouse IL-5, and recombinant r                            |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant porcine IL-5<br>Ile20-Ser134<br>Accession # Q9MYM5                                                                                                                                                                          |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Neutralization</b>      | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | 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 secreted disulfide-linked homodimeric glycoprotein that belongs to the  $\alpha$ -helical group of cytokines that includes IL-3, IL-5 and GM-CSF (1-3). IL-5 is primarily produced by CD4<sup>+</sup> Th2 cells, but eosinophils and mast cells also produce IL-5. Porcine IL-5 is synthesized as a 134 amino acid (aa) precursor that contains a 19 aa signal sequence and a 115 aa mature segment (5). Four  $\alpha$ -helices and two cysteines that form interchain disulfide bonds with a second, antiparallel IL-5 molecule are conserved among species (3-5). Monomeric IL-5 is a predicted 14 kDa protein but usage of N-linked glycosylation sites may increase its molecular weight (5). Mature porcine IL-5 shares 90%, 88%, 86%, 85%, 84%, 66%, 68%, 63%, 63% and 59% aa sequence identity with mature bovine, sheep, cat, equine, canine, human, guinea pig, cotton rat, murine and rat IL-5, respectively. Recombinant porcine IL-5 induced proliferation in the human TF-1 cell line (5). The receptor for human IL-5 consists of a 60 kDa ligand-binding subunit (IL-5 R $\alpha$ ) and a 120 kDa signal-transducing subunit ( $\beta_c$ ). It is suggested that dimeric IL-5 binding to IL-5 R $\alpha$  recruits  $\beta_c$ , which subsequently covalently links with IL-5 R $\alpha$ . Two receptor complexes then associate to form the physiologic IL-5 receptor (6, 7). IL-5 binds proteoglycans, potentially enhancing its activity (8). Following receptor binding, IL-5 promotes the maturation, activation and migration of eosinophils, as demonstrated during asthmatic eosinophilic lung inflammation (1-3). It also mobilizes eosinophils and CD34<sup>+</sup> 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, 9).

## PRODUCT SPECIFIC NOTICES

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