**Porcine IL-4 Antibody**

Monoclonal Mouse IgG, Clone # 99613

Catalog Number: MAB6541

---

**DESCRIPTION**

**Species Reactivity** Porcine

**Specificity** Detects porcine IL-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) IL-4, recombinant mouse IL-4, recombinant rat IL-4, recombinant cotton rat IL-4, and rHIL-13 is observed.

**Source** Monoclonal Mouse IgG, Clone # 99613

**Purification** Protein A or G purified from ascites

**Immunogen** E. coli-derived recombinant porcine IL-4

His25-Cys133

Accession # Q04745

**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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 µg/mL</td>
<td>Recombinant Porcine IL-4 (Catalog # 654-P4)</td>
</tr>
</tbody>
</table>

---

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 0.5 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** 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.

---

**BACKGROUND**

Interleukin-4 (IL-4), also known as B cell-stimulatory factor-1, is a monomeric, approximately 13-18 kDa Th2 cytokine that shows pleiotropic effects during immune responses (1-3). It is a glycosylated polypeptide that contains three intrachain disulfide bridges and adopts a bundled four α-helix structure (4). Porcine IL-4 is synthesized with a 24 amino acid (aa) signal sequence. Mature porcine IL-4 shares 78%, 59%, 41%, and 41% aa sequence identity with bovine, human, mouse, and rat IL-4, respectively. Human IL-4 is active on porcine vascular endothelial cells (5). IL-4 exerts its effects through two receptor complexes (6, 7). The type I receptor, which is expressed on hematopoietic cells, is a heterodimer of the ligand binding IL-4 Rα and the common γ chain (a shared subunit of the receptors for IL-2, -7, -9, -15, and -21). The type II receptor on nonhematopoietic cells consists of IL-4 Rα and IL-13 R1. The type II receptor also transduces IL-13-mediated signals. IL-4 is primarily expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophil (1, 2). It promotes cell proliferation, survival, and immunoglobulin class switch to IgE in B cells, acquisition of the Th2 phenotype by naïve CD4+ T cells, priming and chemotaxis of mast cells, eosinophils, and basophils, and the proliferation and activation of epithelial cells (8, 11). IL-4 plays a dominant role in the development of allergic inflammation and asthma (10, 12).

**References:**