Porcine IL-1β/IL-1F2 Antibody
Monoclonal Mouse IgG1 Clone # 77724
Catalog Number: MAB6811

**DESCRIPTION**

**Species Reactivity**
Porcine

**Specificity**
Detects porcine IL-1β in direct ELISAs and Western blots. In Western blots, 100% cross-reactivity with recombinant human (rh) IL-1β and recombinant mouse (rm) IL-1β is observed and no cross-reactivity with rhIL-1α, rmIL-1α, recombinant porcine IL-1α or recombinant rat IL-1α is observed.

**Source**
Monoclonal Mouse IgG1 Clone # 77724

**Purification**
Protein A or G purified from hybridoma culture supernatant

**Immunogen**
E. coli-derived recombinant porcine IL-1β/IL-1F2 Ala115-Pro267
Accession # P26889.

**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.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porcine IL-1β/IL-1F2 (Catalog # 681-PI)</td>
<td>1 µg/mL</td>
</tr>
<tr>
<td>Reagent</td>
<td>2-8 µg/mL</td>
</tr>
<tr>
<td>Porcine IL-1β/IL-1F2 Antibody</td>
<td>0.1-0.4 µg/mL</td>
</tr>
<tr>
<td>Biotinylated Antibody</td>
<td>75 ng/mL</td>
</tr>
<tr>
<td>Recombinant Porcine IL-1β/IL-1F2 (Catalog # 681-PI)</td>
<td>75 ng/mL</td>
</tr>
</tbody>
</table>

**Neutralization**

Measured by its ability to neutralize IL-1β/IL-1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. The Neutralization Dose (ND<sub>50</sub>) is typically 4-15 µg/mL in the presence of 75 ng/mL Recombinant Porcine IL-1β/IL-1F2 and 1.25 µg/mL concanavalin A.

**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.

**DATA**

Cell Proliferation Induced by IL-1β/IL-1F2 and Neutralization by Porcine IL-1β/IL-1F2 Antibody.

Recombinant Porcine IL-1β/IL-1F2 (Catalog # 681-PI) stimulates proliferation in the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Porcine IL-1β/IL-1F2 (75 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Porcine IL-1β/IL-1F2 Monoclonal Antibody (Catalog # MAB6811). The ND<sub>50</sub> is typically 4-15 µg/mL in the presence of concanavalin A (1.25 µg/mL).

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IL-1 is a name that designates two pleiotropic cytokines, IL-1α (IL-1F1) and IL-1β (IL-1F2), which are the products of distinct genes. IL-1α and IL-1β are structurally related polypeptides that share approximately 27% amino acid (aa) identity in porcine. Both proteins are produced by a wide variety of cells in response to inflammatory agents, infections, or microbial endotoxins. While IL-1α and IL-1β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1α or IL-1β and then associates with IL-1 R accessory protein (IL-1 R3/IL-1 R AcP) to form a high-affinity receptor complex that is competent for signal transduction. IL-1 RII has high affinity for IL-1β but functions as a decoy receptor and negative regulator of IL-1β activity. IL-1ra functions as a competitive antagonist by preventing IL-1α and IL-1β from interacting with IL-1 RI (1-4). The porcine IL-1β cDNA encodes a 267 aa precursor. A 114 aa propeptide is cleaved intracellularly by the cysteine protease IL-1β-converting enzyme (Caspase-1/ICE) to generate the active cytokine (5, 6). The 17 kDa mature porcine IL-1β shares 63-70% aa sequence identity with canine, cotton rat, equine, feline, human, mouse, rat, and rhesus macaque IL-1β.

References: