Canine IL-1β/IL-1F2 Antibody
Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3747

DESCRIPTION

Species Reactivity: Canine
Specificity: Detects canine IL-1β in direct ELISAs and Western blots.
Source: Polyclonal Goat IgG
Purification: Antigen Affinity-purified
Immunogen: E. coli-derived recombinant canine IL-1β/IL-1F2
Accession #: ABB73214
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.

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>Western Blot</th>
<th>Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1 µg/mL</td>
<td>Recombinant Canine IL-1β/IL-1F2 (Catalog # 3747-CL)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intracellular Staining by Flow Cytometry</th>
<th>Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5 µg/10^6 cells</td>
<td>Canine peripheral blood mononuclear cells treated with LPS, fixed with paraformaldehyde, and permeabilized with saponin</td>
</tr>
</tbody>
</table>

CyTOF-ready: Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.

Neutralization: Measured by its ability to neutralize IL-1β/IL-1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. Symons, J.A. et al. (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. et al. (eds): IRL Press. 272. The Neutralization Dose (ND_{50}) is typically 2-10 µg/mL in the presence of 20 pg/mL Recombinant Canine IL-1β/IL-1F2 and 1.25 µg/mL concanavalin A.

DATA

Neutralization: Cell Proliferation induced by IL-1β/IL-1F2 and Neutralization by Canine IL-1β/IL-1F2 Antibody. Recombinant Canine IL-1β/IL-1F2 (Catalog # 3747-CL) stimulates proliferation in the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Canine IL-1β/IL-1F2 (20 pg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Canine IL-1β/IL-1F2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3747). The ND_{50} is typically 2-10 µg/mL in the presence of concanavalin A (1.25 µg/mL).

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: 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.

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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 22% amino acid (aa) identity in dog. 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 canine IL-1β cDNA encodes a 266 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 canine IL-1β shares 68-78% aa sequence identity with cotton rat, equine, feline, human, mouse, porcine, rat, and rhesus macaque IL-1β.

References:
5. Accession # NP_001033060.