Equine IL-1β/IL-1F2 Antibody

Monoclonal Mouse IgG_1 Clone # 855403

Catalog Number: MAB8049

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-1 beta in ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 855403
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E.coli*-derived recombinant equine IL-1 beta Ala116-Ala268 (Glu179Gly, Met188Thr, Thr194Ile, Ser245Lys and Arg256Gln) Accession # Q28386
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.

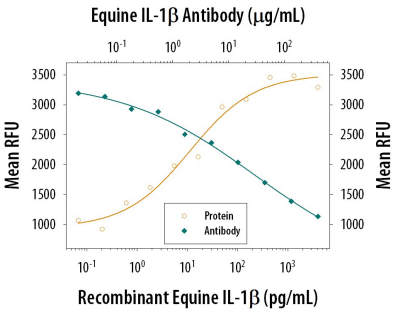
APPLICATIONS

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	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, aThe Neutralization Dose (ND_{50}) is typically 2-10 µg/mL in the presence of 100 pg/mL Recombinant Equine IL-1β/IL-1F2.

DATA

Neutralization



Cell Proliferation Induced by IL-1β/IL-1F2 and Neutralization by Equine IL-1β/IL-1F2 Antibody. Recombinant Equine IL-1ß/IL-1F2 induces proliferation in the D10.G4.1 mouse helper T cell line in the presence of concanavalin A (1.25 µg/mL) in a dose-depend-ent manner (orange line), as measured by the Resazurin (Catalog # Catalog # AR002). Under these conditions, proliferation elicited by IL-1ß/IL-1F2 is neutralized (green line) by increasing concen-trations of Mouse Anti-Equine IL-1ß/IL-1F2 Monoclonal Antibody (Catalog # MAB8049). The ND_{50} is typically 2-10 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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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BACKGROUND

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 equine. 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 equine IL-1β cDNA encodes a 268 aa precursor. A 115 aa propeptide is cleaved intracellularly by the cysteine protease IL-1β-converting enzyme (Caspase-1/ICE) to generate the active cytokine (5-7). An alternatively spliced form of equine IL-1β has a deletion which encompasses the Caspase-1 cleavage site and potentially results in a membrane-associated form (8). The 17 kDa mature equine IL-1β shares 65%-75% aa sequence identity with canine, cotton rat, feline, human, mouse, porcine, rat, and rhesus IL-1β.

References:

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