

DESCRIPTION

Species Reactivity	Equine
Specificity	Detects equine IL-1 β /IL-1F2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant canine IL-1 β , recombinant cotton rat IL-1 β , recombinant feline IL-1 β , recombinant human (rh) IL-1 β , recombin
Source	Monoclonal Rat IgG _{2A} Clone # 424823
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant equine IL-1 β /IL-1F2 Ala116-Ala268 (Glu179Gly, Met188Thr, Thr194Ile, Ser245Lys, Arg256Gln) Accession # NP_001075995
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

IL-1 is a name that designates two pleiotropic cytokines, IL-1 α (IL-1F1) and IL-1 β (IL-1F2), which are the products of distinct genes. IL-1 α and IL-1 β 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-1 α and IL-1 β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1 α or IL-1 β 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-1 β but functions as a decoy receptor and negative regulator of IL-1 β activity. IL-1ra functions as a competitive antagonist by preventing IL-1 α and IL-1 β from interacting with IL-1 RI (1-4). The equine IL-1 β cDNA encodes a 268 aa precursor. A 115 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 β -converting enzyme (Caspase-1/ICE) to generate the active cytokine (5-7). An alternatively spliced form of equine IL-1 β 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-1 β shares 65%-75% aa sequence identity with canine, cotton rat, feline, human, mouse, porcine, rat, and rhesus IL-1 β .

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