

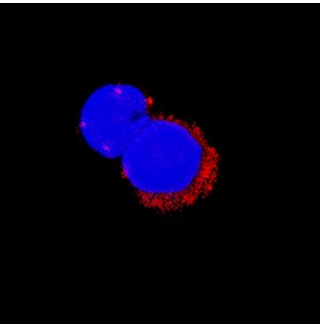
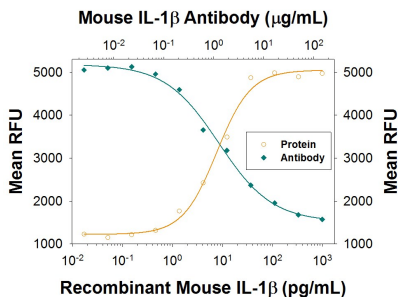
DESCRIPTION	
Species Reactivity	Mouse
Specificity	Detects mouse IL-1 β /IL-1F2 in direct ELISAs.
Source	Recombinant Monoclonal Rat IgG ₁ Clone # 30311R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-1 β /IL-1F2 Val118-Ser269 Accession # P10749
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m 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 μ m 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.

	Recommended Concentration	Sample
Immunocytochemistry	5-25 μ g/mL	See Below
Neutralization		Measured by its ability to neutralize IL-1 β /IL-1F2-induced proliferation in the D10.G4.1 mouse helper T cell line. Symons, J.A. <i>et al.</i> (1987) in <i>Lymphokines and Interferons, a Practical Approach</i> . Clemens, M.J. <i>et al.</i> (eds): IRL Press. 272. The Neutralization Dose (ND ₅₀) is typically 1-5 μ g/mL in the presence of 50 pg/mL Recombinant Mouse IL-1 β /IL-1F2 and 1.25 μ g/mL concanavalin A.

DATA

<p>Immunocytochemistry</p>  <p>IL-1β/IL-1F2 in Mouse Splenocytes. IL-1β/IL-1F2 was detected in immersion fixed mouse splenocytes treated with LPS using Recombinant Rat Anti-Mouse IL-1β/IL-1F2 Monoclonal Antibody (Catalog # MAB401R) at 25 μg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p>	<p>Neutralization</p>  <p>Cell Proliferation Induced by IL-1β/IL-1F2 and Neutralization by Mouse IL-1β/IL-1F2 Antibody. Recombinant Mouse IL-1β/IL-1F2 (Catalog # 401-ML) stimulates proliferation in the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line), as measured by Resazurin (Catalog # AR002). Proliferation elicited by Recombinant Mouse IL-1β/IL-1F2 (50 pg/mL) is neutralized (green line) by increasing concentrations of the Recombinant Rat Anti-Mouse IL-1β/IL-1F2 Monoclonal Antibody (Catalog # MAB401R). The ND₅₀ is typically 1-5 μg/mL in the presence of concanavalin A (1.25 μg/mL).</p>
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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. <ul style="list-style-type: none"> ● 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

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 17% amino acid (aa) identity in mouse. 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 mouse IL-1 β cDNA encodes a 269 aa precursor. A 117 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 β -converting enzyme (Caspase-1/ICE) to generate the active cytokine (5, 6). The 17 kDa mature mouse IL-1 β shares 90% aa sequence identity with cotton rat and rat and 65-78% identity with canine, equine, feline, human, porcine, and rhesus macaque IL-1 β .

References:

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