

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-1 β /IL-1F2 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant rat IL-1 β is observed and less than 10% cross-reactivity with recombinant porcine IL-1 β and recombinant human IL-1 β is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse IL-1 β /IL-1F2 (R&D Systems, Catalog # 401-ML) Val118-Ser269 Accession # NP_032387
Endotoxin Level	<0.1 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.

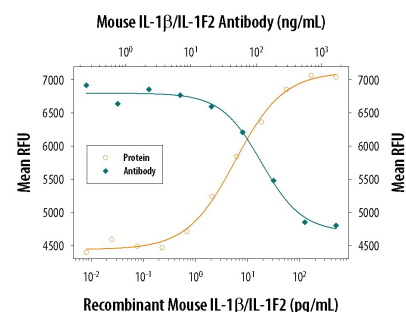
APPLICATIONS

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
Western Blot	0.1 μ g/mL	Recombinant Mouse IL-1 β /IL-1F2 (Catalog # 401-ML)
Immunocytochemistry	5-15 μ g/mL	Immersion fixed mouse T cells
Immunohistochemistry	5-15 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 0.05-0.25 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.	

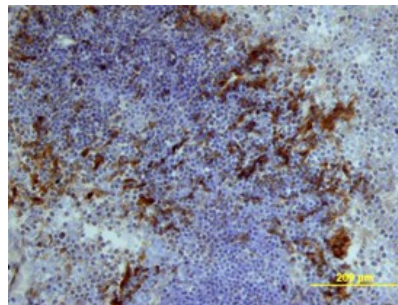
DATA

Neutralization



Cell Proliferation Induced by IL-1 β /IL-1F2 and Neutralization by Mouse IL-1 β /IL-1F2 Antibody. Recombinant Mouse IL-1 β /IL-1F2 (Catalog # 401-ML) stimulates proliferation in the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse IL-1 β /IL-1F2 (50 pg/mL) is neutralized (green line) by increasing concentrations of Mouse IL-1 β /IL-1F2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-401-NA). The ND₅₀ is typically 0.05-0.25 μ g/mL in the presence of concanavalin A (1.25 μ g/mL).

Immunohistochemistry



IL-1 β /IL-1F2 in Mouse Thymus. IL-1 β /IL-1F2 was detected in perfusion fixed frozen sections of mouse thymus using Mouse IL-1 β /IL-1F2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-401-NA) at 15 μ g/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

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.
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 from date of receipt, 2 to 8 °C, reconstituted. 6 months from date of receipt, -20 to -70 °C, reconstituted.

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. 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. 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 .