Mouse IL-1β/IL-1F2 Antibody

Recombinant Monoclonal Rat IgG_1 Clone # 30311R

Catalog Number: MAB401R

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-1β/IL-1F2 in direct ELISAs.
Source	Recombinant Monoclonal Rat IgG_1 Clone # 30311R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*E. coli*-derived recombinant mouse IL-1β/IL-1F2 Val118-Ser269 Accession # P10749
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. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

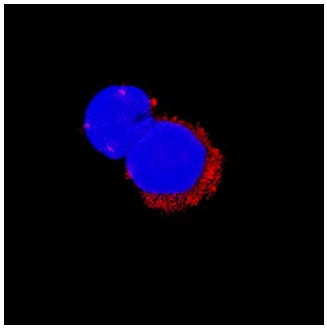
APPLICATIONS

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 µg/mL	See Below
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 1-5 µg/mL in the presence of 50 pg/mL Recombinant Mouse IL-1β/IL-1F2 and 1.25 µg/mL concanavalin A.	

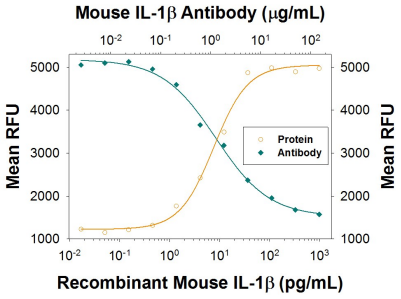
DATA

Immunocytochemistry



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.

Neutralization



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 ND_{50} is typically 1-5 µg/mL in the presence of concanavalin A (1.25 µg/mL).

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.** ● 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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Mouse IL-1β/IL-1F2 Antibody

Recombinant Monoclonal Rat IgG_1 Clone # 30311R

Catalog Number: MAB401R

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 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-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 mouse IL-1β cDNA encodes a 269 aa precursor. A 117 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 mouse IL-1β shares 90% aa sequence identity with cotton rat and rat and 65-78% identity with canine, equine, feline, human, porcine, and rhesus macaque IL-1β.

References:

1. Allan, S.M. *et al.* (2005) Nat. Rev. Immunol. **5**:629.
2. Boraschi, D. and A. Tagliabue (2006) Vitam. Horm. **74**:229.
3. Kornman, K.S. (2006) Am. J. Clin. Nutr. **83**:475S.
4. Isoda, K. and F. Ohsuzu (2006) J. Atheroscler. Thromb. **13**:21.
5. Gray, P.W. *et al.* (1986) J. Immunol. **137**:3644.
6. Martinon, F. and J. Tschopp (2007) Cell Death Differ. **14**:10.

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