Mouse IL-1 RI Antibody

Monoclonal Hamster IgG Clone # JAMA147
Catalog Number: MAB7711

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-1 RI in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-1 RI, rhIL-1 R3, recombinant mouse (rm) IL-18 R, rmIL-1 RII, recombinant rat IL-1 R6, or rhIL-1 R8 is observed.
Source	Monoclonal Hamster IgG Clone # JAMA147
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human cervical epithelial carcinoma cell line HeLa-derived recombinant mouse IL-1 RI
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 as a 0.2 µm filtered solution in PBS.

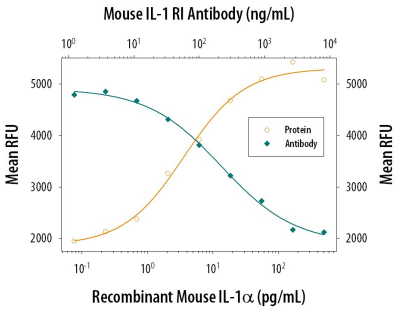
APPLICATIONS

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.*

Neutralization	Measured by its ability to neutralize IL−1α/IL−1F1-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 0.05-0.15 µg/mL in the presence of 50 pg/mL Recombinant Mouse IL−1α/IL−1F1 and 1.25 µg/mL concanavalin A.

DATA

Neutralization



Cell Proliferation Induced by IL-1α/IL-1F1 and Neutralization by Mouse IL-1 RI Antibody. Recombinant Mouse IL-1α/IL-1F1 (Catalog # 400-ML) stimulates proliferation in the the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse IL-1α/IL-1F1 (50 pg/mL) is neutralized (green line) by increasing concentrations of Mouse IL-1 RI Monoclonal Antibody (Catalog # MAB7711). The ND_{50} is typically 0.05-0.15 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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BACKGROUND

Two distinct types of receptors that bind the pleiotropic cytokines IL-1α and IL-1β have been described. The IL-1 receptor Type I is an 80 kDa transmembrane protein that is expressed predominantly by T cells, fibroblasts, and endothelial cells. IL-1 receptor Type II is a 68 kDa transmembrane protein found on B lymphocytes, neutrophils, monocytes, large granular leukocytes, and endothelial cells. Both receptors are members of the immunoglobulin superfamily and show approximately 28% sequence identity in their extracellular domains. The two receptor types do not heterodimerize into a receptor complex. Mouse IL-1 RI shares 63% amino acid sequence homology with human IL-1 RI in their extracellular domains.

An IL-1 receptor accessory protein (1) that can heterodimerize with the Type I receptor in the presence of IL-1α or IL-1β, but not IL-1ra, was identified. This Type I receptor complex appears to mediate all the known IL-1 biological responses. The receptor Type II has a short cytoplasmic domain and does not transduce IL-1 signals. In addition to the membrane-bound form of IL-1 RII, a naturally-occurring soluble form of IL-1 RII has been described. It has been suggested that the Type II receptor, either as the membrane-bound or as the soluble form, serves as a decoy for IL-1 and inhibits IL-1 action by blocking the binding of IL-1 to the signaling Type I receptor complex. Recombinant IL-1 soluble receptor Type I is a potent antagonist of IL-1 action.

References:

1. Greenfeder, S. *et al*. (1995) J. Biol. Chem. **270**:13757.

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