

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-1 RI in direct ELISAs and Western blots. In direct ELISAs, less than 15% cross-reactivity with recombinant mouse IL-18 R and recombinant human IL-1 RI is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IL-1 RI Leu20-Lys338 Accession # P13504
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.

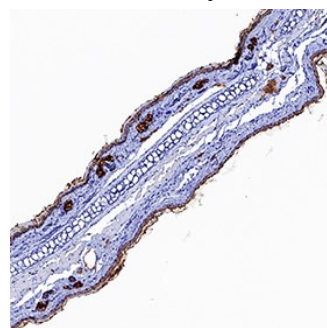
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Mouse IL-1 RI Fc Chimera (Catalog # 771-MR)
Immunohistochemistry	1-15 µg/mL	See Below
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. <i>et al.</i> (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M. J. <i>et al.</i> (eds): IRL Press. 272. The Neutralization Dose (ND ₅₀) is typically 0.2-1.0 µg/mL in the presence of 50 pg/mL Recombinant Mouse IL-1α/IL-1F1.	

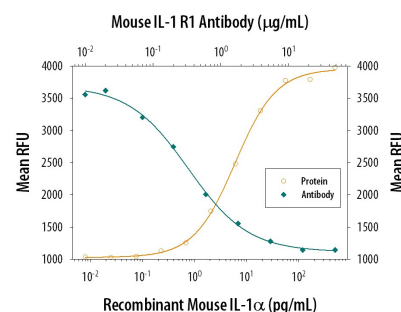
DATA

Immunohistochemistry



IL-1 RI in Mouse Skin. IL-1 RI was detected in perfusion fixed frozen sections of mouse skin (tail) using Goat Anti-Mouse IL-1 RI Antigen Affinity-purified Polyclonal Antibody (Catalog # AF771) at 1 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to developing central nervous system. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

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 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 Goat Anti-Mouse IL-1 RI Antigen Affinity-purified Polyclonal Antibody (Catalog # AF771). The ND₅₀ is typically 0.2-1.0 µg/mL.

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. *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

Two distinct types of receptors that bind the pleiotropic cytokines IL-1 α and IL-1 β 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-1 α or IL-1 β , but not IL-1 α , 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.