Human IL-1 RII Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-263-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-1 RII in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) IL-1α, rhIL-1 RI, recombinant mouse (rm) IL-1α, rhIL-1β, rmIL-1β, recombinant rat IL-1β, rhIL-1ra, rmIL-1ra, and recombinant rhesus monkey IL-1ra is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human IL-1 RII Phe14-Glu343 (Ser56Gly and Glu297Gly) Accession # P27930
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.

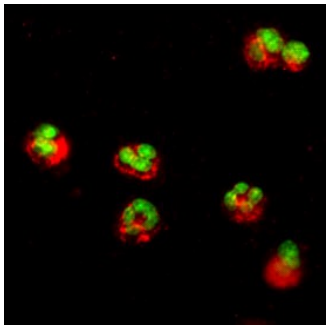
APPLICATIONS

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 Human IL-1 RII (Catalog # 263-2R)
Immunocytochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize IL-1 RII-mediated inhibition of proliferation in the D10.G4.1 mouse helper T cell line. The Neutralization Dose (ND_{50}) is typically 15-30 µg/mL in the presence of 2 µg/mL Recombinant Human IL-1 RII, 50 pg/mL Recombinant Human IL-1β/IL-1F2, and 1.25 µg/mL concanavalin A.	

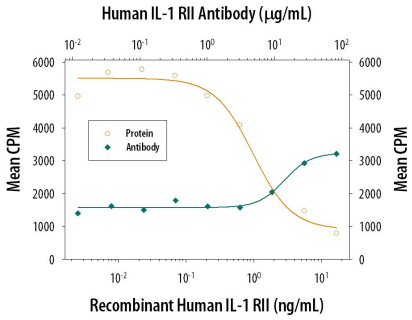
DATA

Immunocytochemistry



IL-1 RII in Human PBMCs. IL-1 RII was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using 15 µg/mL Goat Anti-Human IL-1 RII Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-263-NA) for 3 hours at room temperature. Cells were stained (red) and counterstained (green). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Neutralization



IL-1 RII Inhibition of IL-1β/IL-1F2-dependent Cell Proliferation and Neutralization by Human IL-1 RII Antibody. Recombinant Human IL-1 RII (Catalog # 263-2R) inhibits Recombinant Human IL-1β/IL-1F2 (Catalog # 201-LB) induced proliferation in the D10.G4.1 mouse helper T cell line in a dose-dependent manner (orange line). Inhibition of Recombinant Human IL-1β/IL-1F2 (50 pg/mL) activity elicited by Recombinant Human IL-1 RII (2 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-1 RII Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-263-NA). The ND_{50} is typically 15-30 µg/mL in the presence of concanavalin A (1.25 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.
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 similarity in their extracellular domains. The two receptor types do not heterodimerize in a receptor complex.

An IL-1 receptor accessory protein that can heterodimerize with the type I receptor in the presence of IL-1α or IL-1β but not IL-1ra, was identified (1). 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 II is a potent antagonist of IL-1 action.

References:

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