Human IL-4 Rα Antibody

Polyclonal Goat IgG

Catalog Number: AB-230-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL−4 Rα in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) IL−5 Rα, rhIL-5 Rβ, rhIL-9 R, rhIL-13 Rα1, rhIL-13 Rα2 and recombinant mouse IL-4 R is observed.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human IL−4 Rα Gly24-His232 Accession # P24394
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.

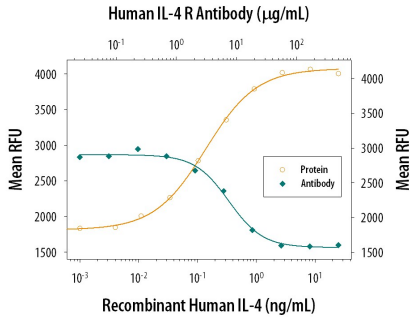
APPLICATIONS

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	1 µg/mL	Recombinant Human IL−4 Rα (Catalog # 230-4R)
Neutralization	Measured by its ability to neutralize IL−4-induced proliferation in the TF−1 human erythroleukemic cell line. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323. The Neutralization Dose (ND_{50}) is typically 5-10 µg/mL in the presence of 0.2 ng/mL Recombinant Human IL−4.	

DATA

Neutralization



Cell Proliferation Induced by IL−4 and Neutralization by Human IL−4 Rα Antibody. Recombinant Human IL−4 (Catalog # 204-IL) stimulates proliferation in the TF−1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IL−4 (0.2 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL−4 Rα Polyclonal Antibody (Catalog # AB−230−NA). The ND_{50} is

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 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.

BACKGROUND

Interleukin 4 (IL-4) is a pleiotropic cytokine produced by activated T cells, mast cells, and basophils. The biological functions of IL-4 are mediated by the binding of IL−4 to high-affinity cell surface receptor complexes. Two types of IL-4 receptor complexes have been described. The type I IL-4 receptor complex is composed of a high-affinity IL-4-binding subunit (referred to as IL-4 Rα) and the common γ chain that does not bind IL-4 by itself. The type II IL-4 receptor complex is composed of IL-4 Rα and IL-13 Rα1. Besides IL-4 signals, the type II IL-4 receptor complex can also transduce IL-13 signals. In the type II complex, the IL-4 Rα subunit binds only IL-4 and not IL-13. Similarly, the IL-13 Rα1 subunit binds only IL-13 and not IL-4. The cDNA clones for both the human and mouse IL-4 Rα have been isolated and shown to encode an approximately 140 kDa type I transmembrane protein with a large cytoplasmic domain that is essential for signal transduction. In mouse cells, an alternatively spliced variant encoding a soluble secreted IL-4 Rα isoform has also been identified. Naturally occurring soluble IL-4 Rα that binds IL-4 with high-affinity has been found in mouse and human biological fluids.

References:

1. Keegan, A.D. (2001) in Cytokine Reference, Academic Press, Vol. **1**:127.