

DESCRIPTION

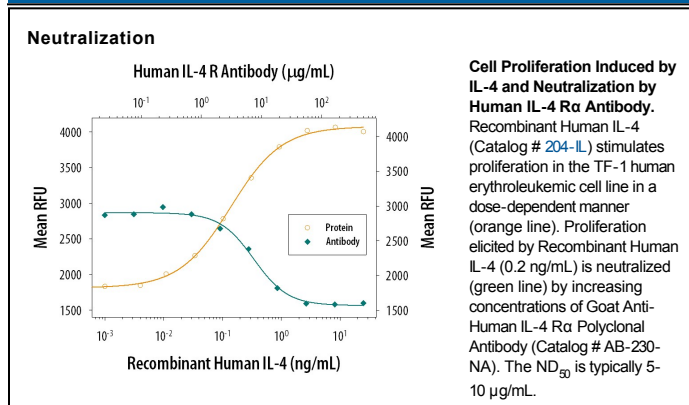
Species Reactivity	Human
Specificity	Detects human IL-4 R α in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) IL-5 R α , rhIL-5 R β , rhIL-9 R, rhIL-13 R α 1, rhIL-13 R α 2 and recombinant mouse IL-4 R is observed.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-4 R α Gly24-His232 Accession # P24394
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m 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 μ g/mL	Recombinant Human IL-4 R α (Catalog # 230-4R)
Neutralization		Measured by its ability to neutralize IL-4-induced proliferation in the TF-1 human erythroleukemic cell line. Kitamura, T. <i>et al.</i> (1989) <i>J. Cell Physiol.</i> 140 :323. The Neutralization Dose (ND ₅₀) is typically 5-10 μ g/mL in the presence of 0.2 ng/mL Recombinant Human IL-4.

DATA



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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

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 R α) 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 R α and IL-13 R α 1. 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 R α subunit binds only IL-4 and not IL-13. Similarly, the IL-13 R α 1 subunit binds only IL-13 and not IL-4. The cDNA clones for both the human and mouse IL-4 R α 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 R α isoform has also been identified. Naturally occurring soluble IL-4 R α 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.