

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-4 R α in direct ELISAs. In direct ELISAs, approximately 10% cross-reactivity with recombinant mouse IL-4 R is observed, and 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, and rhIL-13 R α 2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-4 R α Gly24-His232 Accession # P24394
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS.

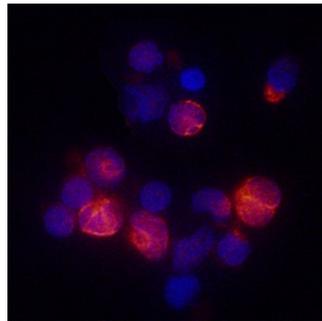
APPLICATIONS

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
Immunocytochemistry	5-15 μ g/mL	See Below

DATA

Immunocytochemistry



IL-4 R α in Human PBMCs. IL-4 R α was detected in immersion fixed unstimulated human peripheral blood mononuclear cells (PBMCs) using Sheep Anti-Human IL-4 R α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6844) at 5 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to plasma membranes. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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

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.