Human IL-15 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF247

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-15 in Western blots. In Western blots, approximately 5% cross-reactivity with recombinant mouse IL-15 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human IL-15 Asn49-Ser162 Accession # P40933
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. 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-15 (Catalog # 247-IL)
Intracellular Staining by Flow Cytometry	2.5 µg/10^6 cells	Human peripheral blood mononuclear cells treated with LPS, fixed with paraformaldehyde, and permeabilized with saponin

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.

BACKGROUND

Interleukin 15 receptor alpha (IL-15 Rα) is a high affinity receptor that specifically binds IL-15 with high affinity and associates as a heterotrimer with the IL-2 receptors beta and gamma subunits to initiate signal transduction. IL-15 Rα is expressed on a wide variety of T cells and B cells as well as non-lymphoid cells. IL-15 Rα is a 58-60 kDa protein that shares structural similarities to the IL-2 Rα protein. IL-15 Rα and IL-2 Rα genes also share similar intron-exon organization and are closely linked on human chromosome 10p14-p15. Human IL-15 Rα shares 45% amino acid (aa) homology with the mouse form of the receptor. Eight isoforms of IL-15 Rα mRNA have been identified resulting from alternative splicing events involving different exons. The exclusion of exon 2 results in an IL-15 Rα isoform that does not bind IL-15. Human IL-15 Rα DE3 cDNA encodes a 267 amino acid (aa) protein that contains a 30 aa signal sequence, a 175 aa extracellular region containing one N-linked glycosylation site, a 21 aa transmembrane domain, and a 41 aa cytoplasmic tail. Signaling of IL-15 can occur in one of three ways; through the heterotrimeric complex of IL-15 Rα, IL-2 Rβ, and IL-2 Rγ_c, through the heterodimeric complex of IL-2 receptors beta and gamma common, through a novel 60-65 kDa IL-15 RX subunit found on mast cells. The binding of IL-15 to IL-15 Rα has been reported to antagonize the TNF-α-mediated apoptosis in fibroblasts by competing with TNF RI for TRAF2 binding.

References:

1. Anderson, D.M. *et al.* (1995) J. Biol. Chem. **270**:29862.
2. Bulfone-Paus, S. *et al.* (1999) FASEB **13**:1575.
3. Waldemann, T.A. and Y. Tagaya (1999) Ann. Rev. Immunol. **17**:19.
4. Dubois, S. *et al.* (1999) J. Biol. Chem. **274**:26978.

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