Human IL-15R alpha Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2639B
Catalog Number: MAB10900

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-15R alpha in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2639B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human IL-15R alpha Met1-Lys173 Accession # NP_751951
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

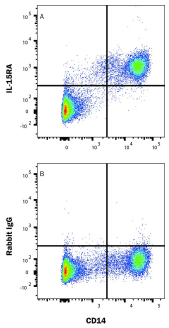
APPLICATIONS

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
Flow Cytometry	0.25 µg/10^6 cells	Human PBMC, untreated or treated with LPS (100 ng/ml) and recombinant human IFN gamma (Catalog # 285-IF, 25 ng/ml) for 24 hour

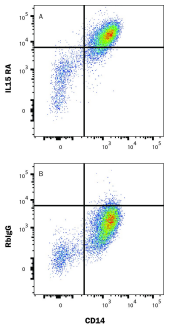
DATA

Flow Cytometry



Detection of IL-15R alpha in Human PBMC Monocytes by Flow Cytometry. Human PBMC were stained with (A) Rabbit Anti-Human IL-15R alpha Monoclonal Antibody (Catalog # MAB10900) or (B) Rabbit IgG Control (Catalog # MAB1050), followed by APC-conjugated anti-Rabbit IgG secondary antibody (Catalog # F0111) and Mouse Anti-Human CD14 PE-conjugated Monoclonal Antibody (Catalog # FAB3832P). Staining was performed using our Staining Membrane-associated Proteins protocol.

Flow Cytometry



Detection of IL-15R alpha in Human PBMC Monocytes by Flow Cytometry. Human PBMC were treated with LPS (100 ng/ml) and recombinant human IFN gamma (Catalog # 285-IF; 25 ng/ml) for 24 hours, then stained with (A) Rabbit Anti-Human IL-15R alpha Monoclonal Antibody (Catalog # MAB10900) or (B) Rabbit IgG Control (Catalog # MAB1050), followed by APC-conjugated anti-Rabbit IgG secondary antibody (Catalog # F0111) and Mouse Anti-Human CD14 PE-conjugated Monoclonal Antibody (Catalog # FAB3832P). Staining was performed using our Staining Membrane-associated Proteins protocol.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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.** • 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.

GLOBAL info@bio-techne.com techsupport@bio-techne.com bio-techne.com/find-us/distributors TEL +1(612) 379 2956
NORTH AMERICA TEL 800 343 7475 • EUROPE | MIDDLE EAST | AFRICA TEL +44 (0)1235 529449
CHINA info.cn@bio-techne.com TEL +86 (21) 52380373

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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 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 $R\gamma_c$, 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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