

DESCRIPTION

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| 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 |
| Conjugate | Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm |
| Formulation | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

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 | 0.25-1 µg/10 ⁶ cells | Human PBMC treated with LPS (100 ng/ml) and recombinant human IFN gamma (Catalog # 285-IF, 25 ng/ml) for 24 hours |

PREPARATION AND STORAGE

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| Shipping | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

Interleukin 15 receptor alpha (IL-15 R α) 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 R α is expressed on a wide variety of T cells and B cells as well as non-lymphoid cells. IL-15 R α is a 58-60 kDa protein that shares structural similarities to the IL-2 R α protein. IL-15 R α and IL-2 R α genes also share similar intron-exon organization and are closely linked on human chromosome 10p14-p15. Human IL-15 R α shares 45% amino acid (aa) homology with the mouse form of the receptor. Eight isoforms of IL-15 R α mRNA have been identified resulting from alternative splicing events involving different exons. The exclusion of exon 2 results in an IL-15 R α isoform that does not bind IL-15. Human IL-15 R α 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 R α , IL-2 R β , and IL-2 R γ_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 R α has been reported to antagonize the TNF- α -mediated apoptosis in fibroblasts by competing with TNF RI for TRAF2 binding.

References:

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

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