Human IL-15 APC-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 34559

Catalog Number: IC2471A

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-15 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-2, recombinant mouse IL-15, or rhIL-21 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 34559
Purification	Protein A or G purified from ascites
Immunogen	*E. coli*-derived recombinant human IL-15 Asn49-Ser162 Accession # P40933
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

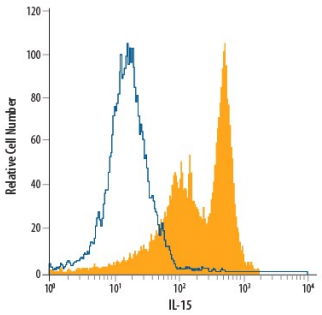
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of IL-15 in LPS-treated Human Blood Monocytes by Flow Cytometry. Human peripheral blood monocytes, resting (open histogram), or treated overnight with 1 µg/mL LPS (filled histogram), were stained with Mouse Anti-Human IL-15 APC-conjugated Monoclonal Antibody (Catalog # IC2471A) or isotype control antibody (Catalog # IC002A, data not shown). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

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.** • 12 months from date of receipt, 2 to 8 °C as supplied.

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BACKGROUND

Interleukin 15 (IL-15) is a widely expressed 14 kDa cytokine that is structurally and functionally related to IL-2 (1–3). Mature human IL−15 shares 70% amino acid sequence identity with mouse and rat IL-15. Alternate splicing generates isoforms of IL-15 with either a long or short signal peptide (LSP or SSP), and the SSP isoform is retained intracellularly (4). IL-15 binds with high affinity to IL-15 Rα (5). It binds with lower affinity to a complex of IL-2 Rβ and the common gamma chain (γc) which are also subunits of the IL-2 receptor complex (1, 6). IL-15 associates with IL-15 Rα in the endoplasmic reticulum, and this complex is expressed on the cell surface (7, 8). The dominant mechanism of IL-15 action is known as transpresentation in which IL-15 and IL-15 Rα are coordinately expressed on the surface of one cell and interact with complexes of IL-2 Rβ/γc on adjacent cells (9). This enables cells to respond to IL-15 even if they do not express IL-15 Rα (8, 10). Soluble IL-15-binding forms of IL-15 Rα can be generated by proteolytic shedding or alternate splicing (11-13). These molecules retain the ability to bind tightly to IL-15 and can either inhibit or augment IL-15 function (5, 12, 13). Consistent with its shared use of IL-2 receptor subunits, IL-15 induces IL-2-like effects in lymphocyte development and homeostasis (3). It is particularly important for the maintenance and activation of NK cells and $CD8^+$ memory T cells (3). IL-15 also exerts pleiotropic effects on other hematopoietic cells and non-immune cells (2). Ligation of membrane-associated IL-15/IL-15 Rα complexes induces reverse signaling that promotes cellular adhesion, tyrosine phosphorylation of intracellular proteins, and cytokine secretion by the IL-15/IL-15 Rα expressing cells (14, 15).

References:

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