**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, Clone # 34559

**Purification**
Protein A or G purified from ascites

**Immunogen**
E. coli-derived recombinant human IL-15
Asn49-Ser162
Accession # P40933

**Conjugate**
Phycoerythrin
Excitation Wavelength: 488 nm
Emission Wavelength: 565-605 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**

- **Intracellular Staining by Flow Cytometry**

<table>
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<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tr>
<td>10 µL/10⁶ cells</td>
<td>See Below</td>
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**DATA**

Detection of IL-15 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) treated with LPS were stained with Mouse Anti-Human IL-15 PE-conjugated Monoclonal Antibody (Catalog # IC2471P, filled histogram) or isotype control antibody (Catalog # IC2471P-2, open histogram). 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.
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-15Rα (5). It binds with lower affinity to a complex of IL-2Rβ and the common gamma chain (γc) which are also subunits of the IL-2 receptor complex (1, 6). IL-15 associates with IL-15Rα 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-15Rα are coordinately expressed on the surface of one cell and interact with complexes of IL-2Rβ/γc on adjacent cells (9). This enables cells to respond to IL-15 even if they do not express IL-15Rα (8, 10). Soluble IL-15-binding forms of IL-15Rα 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-15Rα complexes induces reverse signaling that promotes cellular adhesion, tyrosine phosphorylation of intracellular proteins, and cytokine secretion by the IL-15/IL-15Rα expressing cells (14, 15).

References: