**DESCRIPTION**

**Species Reactivity:** Human  
**Specificity:** Detects human IL-15 in direct ELISAs and Western blots. In direct ELISAs, less than 1% 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  
**Endotoxin Level:** <0.10 EU per 1 µg of the antibody by the LAL method.  
**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.

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>Recommended Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>0.1 µg/mL</td>
<td>Recombinant Human IL-15 (Catalog # 247-IL)</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>5-15 µg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>Neutralization</td>
<td></td>
<td>Measured by its ability to neutralize IL-15-induced proliferation in the MO7e human megakaryocytic leukemic cell line [Avanzi, G. et al. (1988) Br. J. Haematol. 69:359]. The Neutralization Dose (ND50) is typically 0.5-1.5 µg/mL in the presence of 10 ng/mL of Recombinant Human IL-15.</td>
</tr>
</tbody>
</table>

**DATA**

**Immunohistochemistry**

IL-15 in Human Tonsil. IL-15 was detected in immersion fixed paraffin-embedded sections of human tonsil using Goat Anti-Human IL-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF315) at 10 µg/mL overnight at 4 ºC. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

**Neutralization**

Cell Proliferation Induced by IL-15 and Neutralization by Human IL-15 Antibody. Recombinant Human IL-15 (Catalog # 247-IL) stimulates proliferation in the MO7e human megakaryocytic leukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IL-15 (10) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-15 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF315). The ND50 is typically 0.5-1.5 µg/mL.

**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.  
*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 ºC.*

**Stability & Storage**

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.  
- 12 months from date of receipt, -20 to -70 ºC as supplied.  
- 1 month, 2 to 8 ºC under sterile conditions after reconstitution.  
- 6 months, -20 to -70 ºC under sterile conditions after reconstitution.
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: