

## HUMAN IL-15RAANDIL-15 COMPLEX (C-FC) PROTEIN

**Cat.#:** 12249

**Product Name:** Human IL-15RAandIL-15 Complex (C-Fc) Protein

**Size:** 10 µg, 50 µg and 100 µg

**Synonyms:** IL-15 Receptor alpha and IL-15 Fusion Protein;IL15RAandIL15;IL15RAandIL15 Complex;Interleukin-15;IL-15;IL15

**Target:** IL-15RAandamp;IL-15

**UNIPROT ID:** P29459;P29460

**Description:** Recombinant Human Interleukin-15 Receptor Alpha and Interleukin-15 Fusion Protein Complex is produced by our Mammalian expression system and the target gene encoding Ile31-Asp96andAsn49-Ser162 (Asn120Asp) is expressed with a Fc tag at the C-terminus.

**Background:** IL15RA is a high-affinity receptor for interleukin-15. IL15ra associates as a heterotrimer with the IL-2 receptor beta and gamma subunits to initiate signal transduction. It can signal both in cis and trans where IL15R from one subset of cells presents IL15 to neighboring IL2RG-expressing cells. IL15ra is expressed in special cells including a wide variety of T and B cells and non-lymphoid cells. IL-15 is a cytokine that regulates T cell and natural killer cell activation and proliferation. IL-15 binds to the alpha subunit of the IL-15RA with high affinity. IL-15 also binds to the beta and gamma chains of the IL-2 receptor, but not the alpha subunit of the IL2 receptor. IL-15 is structurally and functionally related to IL-2. Both cytokines share some subunits of receptors, allowing them to compete for and negatively regulate each other's activity. The number of CD8 memory T cells is controlled by a balance between IL-15 and IL-2. Despite their many overlapping functional properties, IL-2 and IL-15 are, in fact, quite distinct players in the immune system. IL-15 is constitutively expressed by a wide variety of cell types and tissues, including monocytes, macrophages and DCs. The enhanced activity of the IL-15N72D:IL-15RaSu/Fc complex is likely the result of the increased binding activity of IL-15N72D to IL-15Rβ c , optimized cytokine trans-presentation by the IL-15RaSu domain, the dimeric nature of the cytokine domain and its increased in vivo half-life compared to IL-15. These findings indicate that this IL-15 superagonist complex could serve as a superior immunostimulatory therapeutic agent.

**Species/Host:** HEK293

**Molecular Weight:** 34.4and12.8 KDa

**Molecular Characterization:** Not available

**Purity:** Greater than 95% as determined by reducing SDS-PAGE.

**Formulation & Reconstitution:** Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% – 8% trehalose is added as protectants before lyophilization.

**Storage & Shipping:** Store at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at  $-80^{\circ}\text{C}$  (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

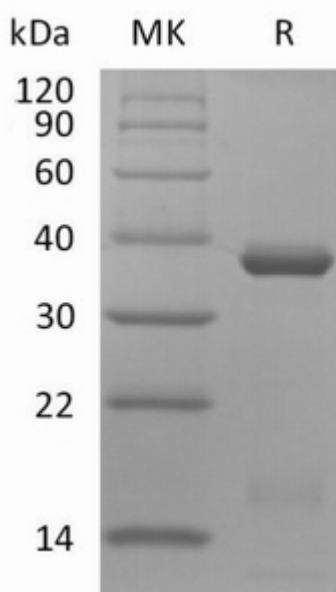


Figure 1. Greater than 95% as determined by reducing SDS-PAGE.