

IL-15RA & IL-15 Protein, Human, Recombinant - PBS Lyophilized (hFc)

General Information

Synonyms:	IL15;IL15RA&IL15;IL-15;Interleukin-15;IL-15 Receptor α & IL-15 Fusion Protein;IL-15 Receptor alpha & IL-15 Fusion Protein;IL15RA&IL15 Complex
Protein Construction:	Ile31-Asp96&Asn49-Ser162 (Asn120Asp)
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q13261&P40933
AA Sequence:	Ile31-Asp96&Asn49-Ser162

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Endotoxin:	< 0.1 ng/ μ g (1 EU/ μ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, 5% Trehalose, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein 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-15R α Su/Fc complex is likely the result of the increased binding activity of IL-15N72D to IL-15R β c , optimized cytokine trans-presentation by the IL-15R α Su 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.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481