Human Interleukin 15 (IL-15)

CATALOG NUMBER: IL-15-010P, 10 µg

Introduction

Interleukin 15 (IL15) is a widely expressed cytokine that is structurally and functionally related to IL 2. Mature human IL15 shares 70% amino acid sequence identity with mouse and rat IL15.Alternate splicing generates isoforms of IL15 with either a long or short signal peptide (LSP or SSP), and the SSP isoform is retained intracellularly . IL15 binds with high affinity to IL15Rα . It binds with lower affinity to a complex of IL2Rβ and the common gamma chain (γc) which are also subunits of the IL2 receptor complex . IL15 associates with IL15Rα in the endoplasmic reticulum, and this complex is expressed on the cell surface. The dominant mechanism of IL15 action is known as transpresentation in which IL15 and IL15Rα are coordinately expressed on the surface of one cell and interact with complexes of IL2Rβ/γc on adjacent cells . This enables cells to respond to IL15 even if they do not express IL15Rα . Soluble IL15binding forms of IL15Rα can be generated by proteolytic shedding or alternate splicing .These molecules retain the ability to bind tightly to IL 15 and can either inhibit or augment IL15 function . Consistent with its shared use of IL2 receptor subunits, IL15 induces IL2like effects in lymphocyte development and homeostasis. It is particularly important for the maintenance and activation of NK cells and CD8+ memory T cells.IL15 also exerts pleiotropic effects on other hematopoietic cells and nonimmune cells .Ligation of membraneassociated IL15/IL15Rα complexes induces reverse signaling that promotes cellular adhesion, tyrosine phosphorylation of intracellular proteins, and cytokine secretion by the IL15/IL15Rα expressing cells.

Description

Recombinant human IL-15 produced in *E.coli* is a single, non-glycosylated, polypeptide chain containing 114 amino acids, having a predicted molecular mass of approximately 12.7 kDa.

Source

E. coli.

Purity

≥ 97% purity (by SDS PAGE and HPLC)

Endotoxin Level

≤1 EU/mg, determined by the LAL method

Biological Activity

Measured in a cell proliferation assay using CTLL-2; the specific activity shall be not less than 5×10^8IU/mg

Formulation

Sterile lyophilized powder, in PBS containing 0.1% HAS, pH7.4
Reconstitute with double distilled water at a concentration of no less than 50 µg/ml.

Storage

Stable for 6-months from the date of shipment when kept at -20 °C or -70 °C. Upon reconstitution, it can be stored at 4 °C for at least one month or -20 °C for at least three months. Avoid repeated freeze-thaw cycles.

Usage

This product is produced for LABORATORY RESEARCH USE ONLY.

Tel: 1-800-919-0755 • Fax: 1-240-683-5852 • info@eEnzyme.com • www.eEnzyme.com