

Animal-Free | Endotoxin-Free | Carrier-Free

IL-15, human, recombinant

Catalog Number: IK2900

DESCRIPTION

Interleukin-15 (IL-15) is a cytokine that plays a major role in the development of inflammatory and protective immune responses to microbial invaders and parasites by modulating immune cells of both the innate and adaptive immune systems. Stimulates the proliferation of natural killer cells, T-cells and B-cells and promotes the secretion of several cytokines. In monocytes, induces the production of IL8 and monocyte chemotactic protein 1/CCL2, two chemokines that attract neutrophils and monocytes respectively to sites of infection. Unlike most cytokines, which are secreted in soluble form, IL15 is expressed in association with its high affinity IL15RA on the surface of IL15-producing cells and delivers signals to target cells that express IL2RB and IL2RG receptor subunits.

SOURCE

Produced in the endosperm tissue of barley grain (*Hordeum vulgare*). ISOkin® growth factors and cytokines are animal-free and serum-free and void of antibiotics, endotoxins, viruses, and prions.

FORMULATION

2xPBS pH 7.2, sterile filtered through 0.22 µm filter.

PURITY

≥90% by SDS-PAGE gel analysis.

SHELF LIFE

The lyophilized protein has a shelf life for 3 years when stored at < -20°C.

RECONSTITUTION

Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline to a concentration of no less than 100 µg/ml. For long term storage of the reconstituted solution, it is recommended to add a carrier protein (0.1% HSA or BSA).

STABILITY

The lyophilized protein, though stable at room temperature for a few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

BIOLOGICAL ACTIVITY

Each batch of ISOkin® growth factors is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkin® recombinant human IL-15 is assayed by measuring its dose-dependent effect on the proliferation of CTLL-2 cells. The ED50 for this effect using IL-15 is typically ≤2 ng/ml. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is <0.0100 EU/µg of ISOkin® product by LAL method.

MAT ASSAY

Purified ISOkin® product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction. (Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland.)

MOLECULAR WEIGHT

Recombinant human IL-15 contains 114 amino acids and an N-terminal 17 amino acid histidine tag for a total length of 131 amino acids and has a predicted molecular mass of 15,04 kDa.

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