



Interleukin-2 (IL-2), human recombinant, plant based, bio-clean (rHuIL-2)

Catalog No: 99902
Lot No: XXXXX
Source: Barley grain
Synonyms: T-cell growth factor (TCGF), Aldesleukin, Lymphokine, IL-2

Background

Interleukin 2 (IL-2) is a potent immunoregulatory growth factor produced by T-cells following stimulation by mitogens or allogens. IL-2 promotes growth and differentiation of various cells of the immune system, such as activated T-cells and B-cells, NK cells, lymphokine activated killer cells, monocytes and macrophages. It is essential for proper immune response, it may also be an important factor in the natural suppression of autoimmunity. IL-2 may be of use as an anti-tumor agent in cancer therapy. Human and mouse IL-2 share 56% aa sequence identity and exhibit cross-species activity.

Description

Recombinant human IL-2, produced in the endosperm tissue of barley grain (*Hordeum vulgare*), contains 133 amino acids and a 16 amino acids histidine-based tag for a total length of 149 amino acids and has a predicted molecular mass of 17.5 kDa. The recombinant protein migrates with an apparent molecular mass of 22 kDa in SDS-PAGE.

Physical Appearance

Lyophilized

Formulation

Lyophilized from PBS pH 7.2.

Solubility

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

Stability

The lyophilized protein, though stable at room temperature for 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.

Purity

Greater than 95% by SDS-PAGE gel analysis.

Activity

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. Bioactivity of recombinant human IL-2 is assayed by measuring its dose dependent effect on proliferation of CTLL-2 cells. The ED50 for this effect is typically <1.25 ng/ml, corresponding to a specific activity >1 x 10⁶ U/mg. Optimal concentration should be determined for specific applications and cell lines.

Endotoxin Level

Endotoxin level is less than 0.005 ng per µg of product (0.05 EU/µg).



MAT Assay

Purified 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.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.