

Recombinant Human Interleukin-2 (IL-2). Animal and Endotoxin free

CATALOGUE NUMBER: AMS-517

AVAILABLE SIZES: 10µg, 50µg, 100µg and 1000µg

DESCRIPTION

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.

SOURCE

Recombinant human IL-2 is produced in the endosperm tissue of barley grain (*Hordeum vulgare*), that exhibits up to 50 times less protease activity than *E.coli* or mammalian cells. Barley seed is void of any human or animal viral contaminants that could jeopardize your cell culture.

FORMULATION

Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2.

PURITY

Greater than 95% by SDS-PAGE gel analysis.

RECONSTITUTION

Note: 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.

BIOLOGICAL 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 x10⁶ U/mg. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg) as measured by turbidimetric kinetic assay. Ref. Associates of Cape Cod Industries, Deacon Park, Knowsley, Liverpool, UK

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. Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland

MOLECULAR WEIGHT

Recombinant human IL-2 contains 133 amino acids and a 16 a.a. histidine-based tag for a total length of 149 a.a. 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.