Recombinant Human IL-2
Catalog Number: 202-IL

DESCRIPTION

Source: E. coli-derived
Ala21-Thr153, with an N-terminal Met
Accession # P60568

N-terminal Sequence Analysis

Predicted Molecular Mass: 15 kDa

SPECIFICATIONS

SDS-PAGE: 13 kDa, reducing conditions

The ED<sub>50</sub> for this effect is typically 0.05-0.25 ng/mL.
The specific activity of Recombinant Human IL-2 is approximately 2.1 x 10<sup>4</sup> IU/μg, which is calibrated against recombinant human IL-2 WHO International Standard (NIBSC code: 86/500).

Endotoxin Level: <0.10 EU per 1 μg of the protein by the LAL method.
Purity: >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 μm filtered solution in Acetonitrile and TFA with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution: Reconstitute at 100 μg/mL in sterile 100 mM Acetic Acid containing at least 0.1% human or bovine serum albumin.

Shipping: The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

SDS-PAGE: 1 μg/lane of Recombinant Human IL-2 was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 13 kDa.

Bioactivity: Recombinant Human IL-2 (Catalog # 202-IL) stimulates cell proliferation of the CTLL-2 mouse cytotoxic T cell line. The ED<sub>50</sub> for this effect is typically 0.05-0.25 ng/mL.
Interleukin-2 (IL-2) is a O-glycosylated, four α-helix bundle cytokine that has potent stimulatory activity for antigen-activated T cells. It is expressed by CD4+ and CD8+ T cells, γδ T cells, B cells, dendritic cells, and eosinophils (1-3). Mature human IL-2 shares 56% and 66% aa sequence identity with mouse and rat IL-2, respectively. Human and mouse IL-2 exhibit cross-species activity (4). The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (5-7). The 55 kDa IL-2 Rα is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 Rβ, which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain γc/IL-2 Rγ, which is shared with the receptors for IL-4, -7, -9, -15, and -21, does not independently interact with IL-2. Upon ligand binding, signal transduction is performed by both IL-2 Rβ and γc. IL-2 is best known for its autocrine and paracrine activity on T cells. It drives resting T cells to proliferate and induces IL-2 and IL-2 Rα synthesis (1, 2). It contributes to T cell homeostasis by promoting the Fas-induced death of naïve CD4+ T cells but not activated CD4+ memory lymphocytes (8). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (9-11). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (12, 13).

References: