**DESCRIPTION**

**Source**  
E. coli-derived  
Ala21-Gln169, with and without an N-terminal Met  
Accession # P04351

**N-terminal Sequence Analysis**  
Aala21 & Met

**Predicted Molecular Mass**  
17.2 kDa

**SPECIFICATIONS**

**Activity**  
The ED₅₀ for this effect is 0.1-0.4 ng/mL.

**Endotoxin Level**  
<0.10 EU per 1 μg of the protein by the LAL method.

**Purity**  
>97%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in Sodium Citrate and Tween®-80 with BSA as a carrier protein. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution**  
Reconstitute at 100-200 μg/mL in sterile PBS 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**

**Bioactivity**

Recombinant Mouse IL-2 (Catalog # 402-ML) stimulates cell proliferation of the CTLL-2 mouse cytotoxic T cell line. The ED₅₀ for this effect is 0.1-0.4 ng/mL.

**SDS-PAGE**

1 μg lane of Recombinant Mouse IL-2 was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a band(s) at 19 kDa.
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 mouse IL-2 shares 56% and 73% aa sequence identity with human and rat IL-2, respectively. It shows strain-specific heterogeneity in an N-terminal region that contains a poly-glutamine stretch (4). Mouse and human IL-2 exhibit cross-species activity (5). The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (6-8). 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 (9). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (10-12). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (13, 14).

References: