Human Interleukin-2 (hIL-2)

**MW (kDa):** 14

**UniProt ID:** #P60568

**Entrez-Gene Id:** 3558

**Background**

IL-2 is a T cell stimulatory cytokine best known for inducing T cell proliferation and NK cell proliferation and activation (1,2). IL-2 also promotes peripheral development of Treg cells (4, 5). Conversely, IL-2 is involved in activation induced cell death (AICD) that is observed post T cell expansion by increasing levels of Fas on CD4+ T cells (3). The effects of IL-2 are mediated through a trimeric receptor complex consisting of IL-2Rα, IL-2Rβ and the common gamma chain, γc (1,2). IL-2 Rα binds exclusively to IL-2 with low affinity and increases binding affinity of the whole receptor complex including IL-2Rβ and γc subunits. IL-2Rβ is also used by IL-15 (1,2). The common γc is used by other cytokines including IL-4, IL-7, IL-9, IL-15, and IL-21 (1,2). Binding of IL-2 initiates signaling cascades involving Jak1, Jak3, Stat5 and the PI3K/Akt pathways (1,2).

**Endotoxin**

Less than 0.01 ng endotoxin/1 μg hIL-2.

**Purity**

>98% as determined by SDS-PAGE of 6 μg reduced (+) and non-reduced (-) recombinant hIL-2. All lots are greater than 98% pure.

**Source / Purification**

Recombinant human IL-2 (hIL-2) Ala21-Thr153 (Accession #NM_000586) was produced in *E. coli* at Cell Signaling Technology.

**Bioactivity**

The bioactivity of recombinant hIL-2 was determined in a CTLL-2 cell proliferation assay. The ED\textsubscript{50} of each lot is between 0.1 - 1.0 ng/ml.

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**References**


**Cross-Reactivity Key**

- **H:** human
- **M:** mouse
- **R:** rat
- **Hm:** hamster
- **Mk:** monkey
- **Vir:** virus
- **Mi:** mink
- **C:** chicken
- **Dm:** D. melanogaster
- **X:** Xenopus
- **Z:** zebrafish
- **B:** bovine
- **Dg:** dog
- **Pg:** pig
- **Sc:** S. cerevisiae
- **Ce:** C. elegans
- **Hr:** horse
- **GP:** Guinea Pig
- **Rab:** rabbit
- **All:** all species expected

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