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Human IL-2 Recombinant Protein

10 µg

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For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
15.5**UniProt ID:**
#P60568**Entrez-Gene Id:**
3558

Background

Interleukin-2 (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-2R α , IL-2R β , and the common gamma chain, γ c (1,2). IL-2 R α binds exclusively to IL-2 with low affinity and increases binding affinity of the whole receptor complex including IL-2R β and γ c subunits. IL-2R β is also used by IL-15 (1,2). The common γ c 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

Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-2.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human IL-2 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hIL-2 was determined in a CTLL-2 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 3 ng/ml.

Background References

1. Ma, A. et al. (2006) *Annu Rev Immunol* 24, 657-79.
2. Gaffen, S.L. and Liu, K.D. (2004) *Cytokine* 28, 109-23.
3. Jaleco, S. et al. (2003) *J Immunol* 171, 61-8.
4. Fehérvari, Z. et al. (2006) *Trends Immunol* 27, 109-11.
5. Antony, P.A. et al. (2006) *J Immunol* 176, 5255-66.

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