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Human Interleukin-2 (hIL-2) (mammalian derived)

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):	UniProt ID:	Entrez-Gene Id:
15	#P60568	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 (3,4). 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 (5). 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-2R 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

Less than 0.01 ng endotoxin/1 μ g hIL-2.

Purity

>98% as determined by SDS-PAGE of 6 μ g 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 # NP_000577) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant hIL-2 was determined in a CTLL-2 cell proliferation assay. The ED₅₀ of each lot is between 30-200 pg/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. Fehérvári, Z. et al. (2006) *Trends Immunol* 27, 109-11.
4. Antony, P.A. et al. (2006) *J Immunol* 176, 5255-66.
5. Jaleco, S. et al. (2003) *J Immunol* 171, 61-8.

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