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# Mouse IL-2 Recombinant Protein

20 µg



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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

**MW (kDa):**  
17

**UniProt ID:**  
#P04351

**Entrez-Gene Id:**  
16183

## 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 regulatory T cells (Tregs) (3,4). Conversely, IL-2 is involved in the activation-induced cell death (AICD) that is observed post T cell expansion by increasing levels of Fas on CD4<sup>+</sup> T cells (5). The effects of IL-2 are mediated through a trimeric receptor complex consisting of IL-2R $\alpha$ , IL-2R $\beta$ , and the common gamma chain,  $\gamma$ c (1,2). IL-2R $\alpha$  binds exclusively to IL-2 with low affinity and increases the binding affinity of the whole receptor complex including IL-2R $\beta$  and  $\gamma$ c subunits. IL-15 also binds to IL-2R $\beta$  (1,2).  $\gamma$ 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 mL-2.

## Purity

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

## Source / Purification

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

## Bioactivity

The bioactivity of recombinant mL-2 was determined in a CTLL-2 cell proliferation assay. The ED<sub>50</sub> of each lot is less than or equal to 5 ng/ml.

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## 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. Fehérvari, 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.

## 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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