Store at -20°C

Mouse IL-2 Recombinant Protein

#68966

20 µg

New 11/20

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Entrez-Gene ID #16183
UniProt ID #P04351

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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 $CD4^+$ T cells (5). 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-2Rα binds exclusively to IL-2 with low affinity and increases the binding affinity of the whole receptor complex including IL-2Rβ and γc subunits. IL-15 also binds to IL-2Rβ (1,2). 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).

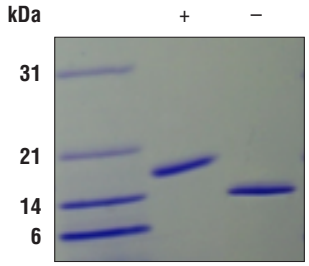
Molecular Weight: 17 kDa

Endotoxin: Endotoxin levels are ≤1 EU / 1 µg mIL-2.

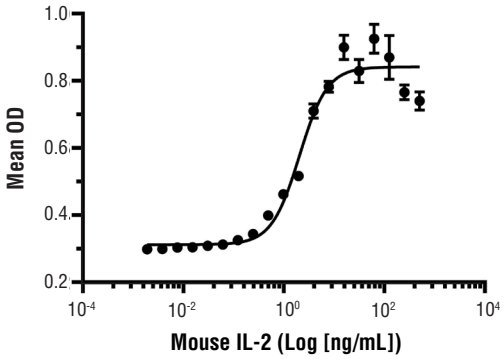
Purity: ≥95% purity was determined by SDS-PAGE.

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

Bioactivity: The bioactivity of recombinant mIL-2 was determined in a CTLL-2 cell proliferation assay. The ED_{50} of each lot is ≤5 ng/ml.



The purity of Mouse IL-2 Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant mIL-2 and staining with Coomassie Blue.



Serial dilutions of Mouse IL-2 Recombinant Protein were added to CTLL-2 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED_{50}.

Storage: Mouse IL-2 Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile 10 mM acetic acid at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

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.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.