

# Recombinant Human IL-2 Protein

Catalog No.: RP01701 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3558	P60568

**Tags**  
NO-tag

**Synonyms**  
IL-2; TCGF; lymphokine

## Product Information

Source	Purification
HEK293 cells	

**Calculated MW** **Observed MW**

**Endotoxin**  
<0.1EU/ $\mu$ g

**Formulation**  
Lyophilized from a 0.22  $\mu$ m filtered solution of PBS, pH 7.4.

**Reconstitution**  
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Interleukin-2 (IL-2) is an interleukin, a type of cytokine immune system signaling molecule, which is a leukocytotropic hormone that is instrumental in the body's natural response to microbial infection and in discriminating between foreign (non-self) and self. IL-2 mediates its effects by binding to IL-2 receptors, which are expressed by lymphocytes, the cells that are responsible for immunity. Mature human IL-2 shares 56% and 66% aa sequence identity with mouse and rat IL-2, respectively. Human and mouse IL-2 exhibit crossspecies activity. The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes. IL-2 is also necessary during T cell development in the thymus for the maturation of a unique subset of T cells that are termed regulatory T cells (T-regs). After exiting from the thymus, T-Regs function to prevent other T cells from recognizing and reacting against "self antigens", which could result in "autoimmunity". T-Regs do so by preventing the responding cells from producing IL-2. Thus, IL-2 is required to discriminate between self and non-self, another one of the unique characteristics of the immune system.

## Basic Information

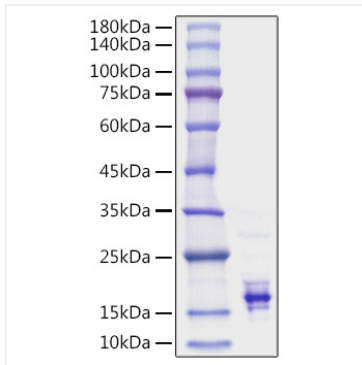
**Description**  
Recombinant Human IL-2 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ala21-Thr153) of human IL-2 (Accession #NP\_000577.2) fused with no additional amino acid.

**Bio-Activity**  
Measured in a cell proliferation assay using HT-2 mouse T cells. The ED<sub>50</sub> for this effect is 4.6-18.6 ng/mL, corresponding to a specific activity of 5.38 $\times$ 10<sup>4</sup>~2.17 $\times$ 10<sup>5</sup> units/mg.

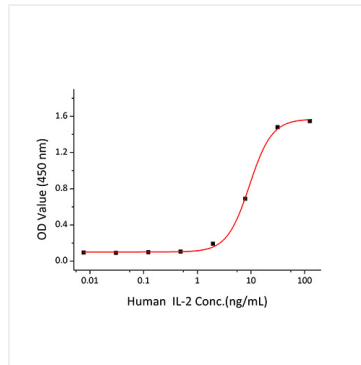
**Storage**  
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human IL-2 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at showing bands at 15.4 kDa and 18 kDa.



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