

RP01769

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# Recombinant Rat IL-2 Protein

Catalog No.: RP01769 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
HEK293 cells	116562	P17108

### Tags

C-His

### Synonyms

IL-2 ; IL2

## Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE.

### Endotoxin

< 0.1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm 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



[www.abclonal.com](http://www.abclonal.com)

## Background

Interleukin-2, also known as a T-cell growth factor, TCGF, Aldesleukin, and IL2, is a secreted protein that belongs to the IL-2 family. Interleukin-2 / IL-2 was the first interleukin molecule to be discovered. Interleukin-2 / IL-2 molecule was first purified to homogeneity by immunoaffinity chromatography by Kendall Smith and his team at Dartmouth Medical School. Interleukin-2 / IL-2 was also the first cytokine shown to mediate its effects via a specific IL-2 receptor, and it was also the first interleukin to be cloned and expressed from a complementary DNA (cDNA) library. Interleukin-2 / IL-2 was designated number 2 because Smith's data at the time indicated that IL-1, produced by macrophages, facilitates IL-2 production by T lymphocytes (T cells). Interleukin-2 / IL-2 is produced by T-cells in response to antigenic or mitogenic stimulation, this protein is required for T-cell proliferation and other activities crucial to regulation of the immune response. Interleukin-2 / IL-2 is normally produced by the body during an immune response. When environmental substances (molecules or microbes) gain access to the body, these substances (termed antigens) are recognized as foreign by antigen receptors that are expressed on the surface of lymphocytes. Antigen binding to the T cell receptor (TCR) stimulates the secretion of Interleukin-2 / IL-2 and the expression of IL-2 receptors IL-2R. The IL-2 / IL-2R interaction then stimulates the growth, differentiation, and survival of antigen-selected cytotoxic T cells via the activation of the expression of specific genes. Interleukin-2 / IL-2 can stimulate B-cells, monocytes, lymphokine-activated killer cells, natural killer cells, and glioma cells.

## Basic Information

### Description

Recombinant Rat IL-2 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Pro22-Gln155) of rat IL-2 (Accession #NP\_446288.1) fused with and a 6×His tag at the C-terminus.

### Bio-Activity

Measured in a cell proliferation assay using HT $\square$  2 mouse T cells. The ED50 for this effect is 0.65 $\square$  2.6 ng/mL, corresponding to a specific activity of 3.85 × 10<sup>5</sup>-1.54 × 10<sup>6</sup> units/mg.

### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

### Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

### Storage

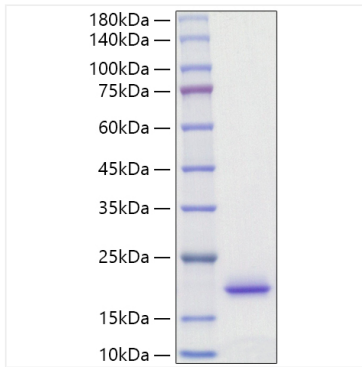
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

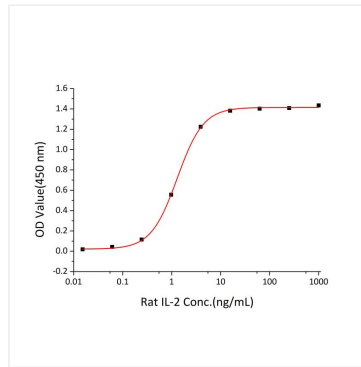
Avoid repeated freeze/thaw cycles.

\* For your safety and health, please wear a lab coat and disposable gloves when handling.

## Validation Data



Recombinant Rat IL-2 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Rat IL-2 stimulates cell proliferation of the HT 2 mouse T cells. The ED50 for this effect is 0.65 ± 2.6 ng/mL, corresponding to a specific activity of  $3.85 \times 10^5 \sim 1.54 \times 10^6$  units/mg.