

# Recombinant Rat IL-7 Protein

Catalog No.: RP01721 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Rat	25647	Q91Y32

### Tags

C-6His

### Synonyms

IL-7; Interleukin-7 $\square$ IL7

## Product Information

Source	Purification
HEK293 cells	> 92% by SDS-PAGE.

### Endotoxin

<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 freeze-thaw cycles.

## Contact

 | 400-999-6126 | [cn.market@abclonal.com.cn](mailto:cn.market@abclonal.com.cn) | [www.abclonal.com.cn](http://www.abclonal.com.cn)

## Background

IL7, also known as interleukin 7, is a hematopoietic growth factor that belongs to the IL-7/IL-9 family. It is secreted by stromal cells in the bone marrow and thymus. IL7 stimulates the proliferation of lymphoid progenitors. It is important for proliferation during certain stages of B-cell maturation. IL7 and the hepatocyte growth factor (HGF) form a heterodimer that functions as a pre-pro-B cell growth-stimulating factor. It is found to be a cofactor for V(D)J rearrangement of the T cell receptor beta (TCR $\beta$ ) during early T cell development. IL7 can be produced locally by intestinal epithelial and epithelial goblet cells and may serve as a regulatory factor for intestinal mucosal lymphocytes.

## Basic Information

### Description

Recombinant Rat IL-7 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp26-Ile154) of rat IL-7 (Accession #NP\_037242.2) fused with and a 6 $\times$ His tag at the C-terminus.

### Bio-Activity

Measured in a cell proliferation assay using murine 2E8 cells. The ED<sub>50</sub> for this effect is 0.9-3.6 ng/mL, corresponding to a specific activity of 2.9 $\times$ 10<sup>5</sup>~1.2 $\times$ 10<sup>6</sup> units/mg.

### Storage

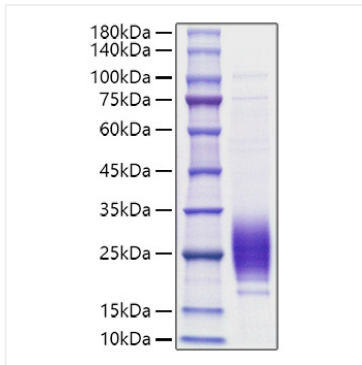
Store at -20 $^{\circ}$ C. Store the lyophilized protein at -20 $^{\circ}$ C to -80  $^{\circ}$ C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20 $^{\circ}$ C for 3 months, at 2-8 $^{\circ}$ C for up to 1 week.

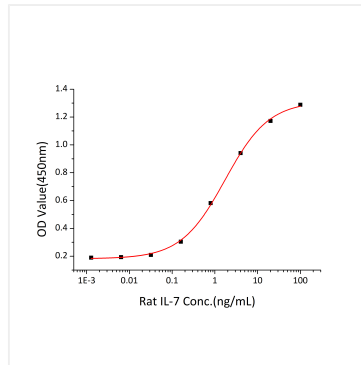
Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Rat IL-7 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 17 kDa.



Recombinant Rat IL-7 stimulates cell proliferation of the murine 2E8 cells. The  $ED_{50}$  for this effect is 0.9-3.6 ng/mL, corresponding to a specific activity of  $2.9 \times 10^5 \sim 1.2 \times 10^6$  units/mg.