

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.

Calculated MW	Observed MW
15.73 kDa	17-35 kDa

Endotoxin

<1EU/ μ g


Formulation

Lyophilized from a 0.22 μ 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

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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 β) 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 ED₅₀ for this effect is 0.9-3.6 ng/mL, corresponding to a specific activity of 2.9 \times 10⁵~1.2 \times 10⁶ units/mg.

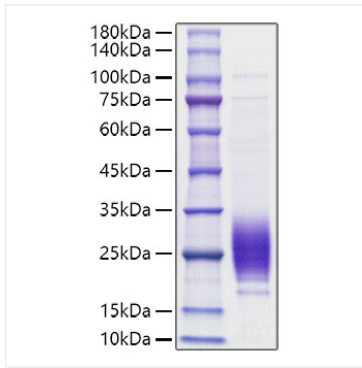
Storage

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.

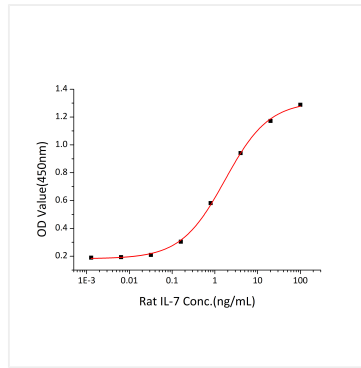
After reconstitution, the protein solution is stable at -20 $^{\circ}$ C for 3 months, at 2-8 $^{\circ}$ C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



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.