

RP01707

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Recombinant Human IL-7 Protein

Catalog No.: RP01707

Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
HEK293 cells	3574	P13232-1

Tags

No-tag

Synonyms

IL-7;Interleukin-7;IL7

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?) 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

Product Information

Source

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.

Purification

≥ 90 % as determined by SDS-PAGE.

Description

Recombinant Human IL-7 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp26-His177) of human IL-7 (Accession #NP_000871.1) fused with no additional amino acid.

Bio-Activity

1. Measured in a cell proliferation assay using IL-2 (Catalog: RP01384)-activated mouse spleen cell. The ED_{50} for this effect is 13-53 pg/mL, corresponding to a specific activity of $1.89 \times 10^7 \sim 7.69 \times 10^7$ units/mg. 2. Measured in a cell proliferation assay using murine 2E8 cells. The ED_{50} for this effect is 2.2-8.7 ng/mL, corresponding to a specific activity of $1.15 \times 10^5 \sim 4.54 \times 10^6$ units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. 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 . Avoid repeated freeze/thaw cycles.

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

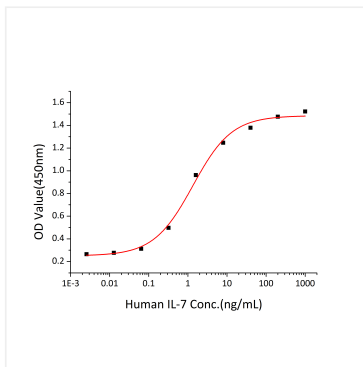
0.1-0.5 mg/mL in sterile distilled water.
Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

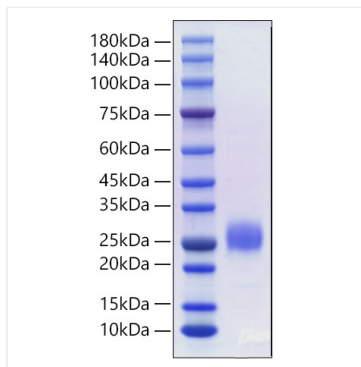


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Validation Data



Measured in a cell proliferation assay using murine 2E8 cells. The ED₅₀ for this effect is 0.67-2.68 ng/mL, corresponding to a specific activity of $3.7 \times 10^5 \sim 1.49 \times 10^6$ units/mg.



Recombinant Human IL-7 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.