

# Human IL-7 Protein

Cat. No. IL7-HE001

## Description

<b>Source</b>	Recombinant Human IL-7 Protein is expressed from E.coli without tag. It contains Asp26-His177.
<b>Accession</b>	P13232
<b>Molecular Weight</b>	The protein has a predicted MW of 17.5 kDa same as Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.01 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

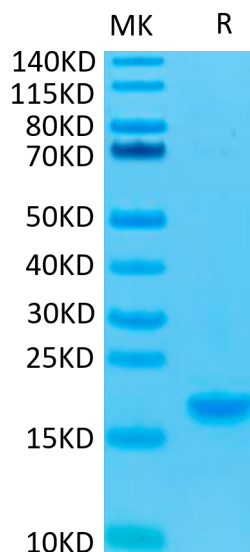
<b>Formulation</b>	Lyophilized from 0.22 µm filtered solution in PBS (pH 8.0). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3-6 months after reconstitution. 2-8°C for 2-7 days after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Interleukin-7 (IL7) plays a nonredundant role in T cell survival and homeostasis, which is illustrated in the severe T cell lymphopenia of IL7-deficient mice, or demonstrated in animals or humans that lack expression of either the IL7R $\alpha$  or  $\gamma$  c chain, the two subunits that constitute the functional IL7 receptor.

## Assay Data

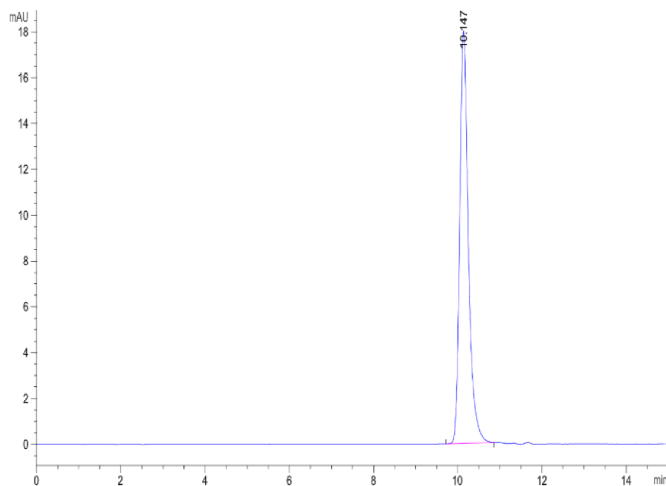
### Bis-Tris PAGE



Human IL-7 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

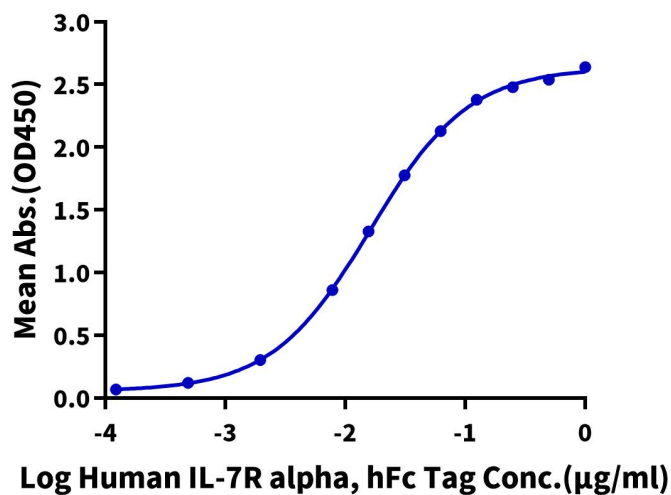
Assay Data



The purity of Human IL-7 is greater than 95% as determined by SEC-HPLC.

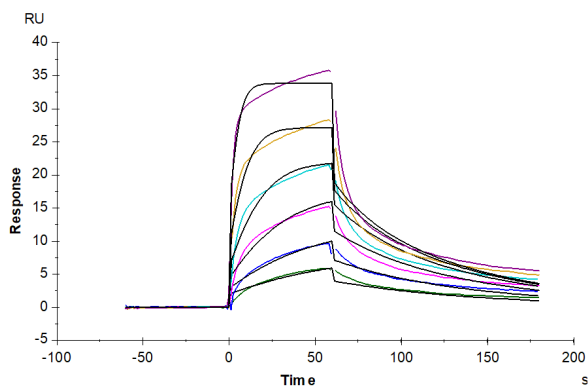
ELISA Data

**Human IL-7, No Tag ELISA**  
0.2µg Human IL-7, No Tag Per Well



Immobilized Human IL-7 at 2µg/ml (100µl/Well) on the plate. Dose response curve for Human IL-7R alpha, hFc Tag with the EC<sub>50</sub> of 16.2ng/ml determined by ELISA (QC tested).

SPR Data

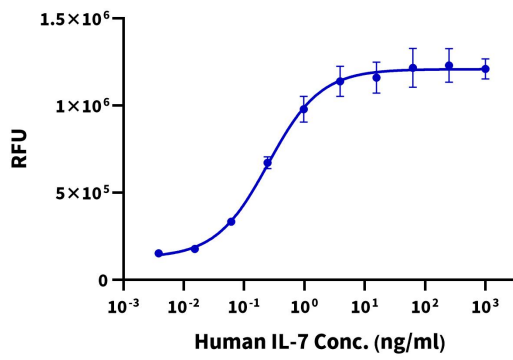


Human IL-7 R alpha, His Tag captured on CM5 Chip via anti-his antibody can bind Human IL-7, No Tag with an affinity constant of 7.15 nM as determined in SPR assay (Biacore T200).

Cell Based Assay

Assay Data

Recombinant Human IL-7 Bioactivity



Measured in a cell proliferation assay using murine 2E8 cells. The ED50 for this effect is 0.1 - 0.5 ng/mL (QC tested).