

## Recombinant Human IL-7 Protein

**Catalog Number: GMP-TL506**

**DMF filed: 038126**

### Product Name

Generic Name	Recombinant Human IL-7 Protein
Synonym	IL7, Interleukin-7

### Product Information

Construction	A DNA sequence encoding the human IL-7 (P13232-1: D26-H177) was expressed with a Fc-tag at the C-terminus.
Expression Host	CHO cells
QC Testing Purity	> 95 % as determined by SDS-PAGE and HPLC
Activity	Cell proliferation assay was performed on PBMC cells activated with CD3 monoclonal antibody, with an ED <sub>50</sub> of 2-20 ng/mL and a corresponding specific activity of > 1 × 10 <sup>9</sup> Units/mg (calibrated according to human IL-7 reference standard (NIBSC code: 90/530))
Endotoxin	< 0.01 EU per 1 μg of the protein by the LAL method.
Molecular Mass	The recombinant human IL-7 protein predicts a molecular mass of 43.8 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization. 24 months at 2°C to 8°C in lyophilized state. 6 months at -20°C under sterile conditions after reconstitution.
Stability & Storage	12 months at -80°C under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100 μg/mL. Avoid repeated freeze-thaw cycles.

### Background

IL-7 is an important cytokine for the growth, survival, and differentiation of T, B, and NK cells. The heterodimer formed by IL-7 and hepatocyte growth factor (HGF) is a precursor B cell growth stimulating factor. Studies on gene knockout in mice have shown that IL-7 plays a crucial role in the survival of lymphocytes. IL-7 stimulates pluripotent stem cells to differentiate into lymphoid progenitor cells.

### References

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2. H.R. Kim, K.A. Hwang, S.H. Park, I. Kang. IL-7 and IL-15: biology and roles in T-Cell immunity in health and disease. *Crit Rev Immunol*, 28 (2008), pp. 325-339.
3. Su N, Shi SX, Zhu X, Borazanci A, Shi F, Gan Y. Interleukin-7 expression and its effect on natural killer cells in patients with multiple sclerosis. *J Neuroimmunol* (2014) 276:180–6.