

## IL-7 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P70566
Synonyms:	IL-7; IL-7 interleukin-7; interleukin-7; Lymphopoietin -1; PBGF
Species:	Mouse
Source:	HEK293
Accession:	P10168 (E26-I154)
Gene ID:	16196
Molecular Weight:	22-28 kDa

### PROPERTIES

AA Sequence	<p>E C H I K D K E G K    A Y E S V L M I S I    D E L D K M T G T D    S N C P N N E P N F</p> <p>F R K H V C D D T K    E A A F L N R A A R    K L K Q F L K M N I    S E E F N V H L L T</p> <p>V S Q G T Q T L V N    C T S K E E K N V K    E Q K K N D A C F L    K R L L R E I K T C</p> <p>W N K I L K G S I</p>
Biological Activity	<p>1. Mouse IL-7RA-Fc can bind Mouse IL-7-His with an affinity constant of 18.9 nM.</p> <p>2. Measured in a cell proliferation assay using PHA-activated human peripheral blood lymphocytes (PBL). The ED<sub>50</sub> for this effect is 60-1000 pg/mL.</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>IL-7, a hematopoietic cytokine, plays a pivotal role in the development, expansion, and survival of both naive and memory T-cells and B-cells, thereby regulating the population of mature lymphocytes and maintaining lymphoid homeostasis. Its biological effects are mediated through a receptor complex consisting of the IL7RA subunit and the cytokine receptor common subunit gamma/CSF2RG. Upon binding to the receptor, IL-7 activates various kinases, such as JAK1 or JAK3,</p>
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depending on the cell type, leading to the propagation of signals through downstream signaling pathways, including PI3K/Akt/mTOR or JAK-STAT5. This interaction with its receptor components IL7R and CSF2RG is central to the diverse cellular responses elicited by IL-7.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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