

## Animal-Free IL-7 Protein, Mouse (His)

<b>Cat. No.:</b>	HY-P700217AF
<b>Synonyms:</b>	IL-7; IL-7 interleukin-7; interleukin-7; Lymphopoietin -1; PBGF
<b>Species:</b>	Mouse
<b>Source:</b>	E. coli
<b>Accession:</b>	P10168 (E26-I154)
<b>Gene ID:</b>	16196
<b>Molecular Weight:</b>	Approximately 15.84 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> M 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 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 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 W N K I L K G S I           </pre>
<b>Biological Activity</b>	Measured in a cell proliferation assay using PHA-activated human peripheral blood lymphocytes (PBMC). The ED <sub>50</sub> for this effect is <0.2 ng/mL. The specific activity of recombinant mouse IL-7 is > 5 x 10 <sup>6</sup> IU/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a solution containing 1X PBS, pH 7.4.
<b>Endotoxin Level</b>	<0.1 EU per 1 µg of the protein by the LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	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, 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
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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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