

Animal-Free IL-7 Protein, Human (His)

Cat. No.:	HY-P700132AF
Synonyms:	IL7; IL-7; IL-7interleukin-7; interleukin 7; Lymphopoietin-1; PBGF
Species:	Human
Source:	E. coli
Accession:	P13232 (D26-H177)
Gene ID:	3574
Molecular Weight:	Approximately 18.3 kDa

PROPERTIES

AA Sequence	<pre> M D C D I E G K D G K Q Y E S V L M V S I D Q L L D S M K E I G S N C L N N E F N F F K R H I C D A N K E G M F L F R A A R K L R Q F L K M N S T G D F D L H L L K V S E G T T I L L N C T G Q V K G R K P A A L G E A Q P T K S L E E N K S L K E Q K K L N D L C F L K R L L Q E I K T C W N K I L M G T K E H </pre>
Biological Activity	Measured in a cell proliferation assay using PHA-activated human peripheral blood lymphocytes (PBMC). The ED ₅₀ for this effect is <0.8 ng/mL. The specific activity of recombinant human IL-7 is >7 x 10 ⁸ IU/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 µg of the protein by the LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
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	The IL-7 protein serves as a crucial hematopoietic cytokine, playing an indispensable role in the development, expansion, and survival of both naive and memory T-cells as well as B-cells, thereby regulating the population of mature lymphocytes and maintaining lymphoid homeostasis. Its biological effects are executed through a receptor comprised of the IL7RA subunit and the cytokine receptor common subunit gamma/CSF2RG. Upon binding to the receptor, IL-7 activates various kinases, including JAK1 or JAK3, depending on the cell type. This activation leads to the propagation of signals through multiple downstream pathways, such as the PI3K/Akt/mTOR or the JAK-STAT5 pathways. IL-7's interaction with IL7R and
-------------------	--

CSF2RG highlights its pivotal role in orchestrating diverse signaling cascades crucial for immune cell development and function.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA