# Animal-Free IL-15 Protein, Human (His)

| | |
|---|---|
| **Cat. No.:** | HY-P7371AF |
| **Synonyms:** | Interleukin-15; IL-15; IL15 |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | P40933 (N49-S162) |
| **Gene ID:** | 3600 |
| **Molecular Weight:** | Approximately 13.7 kDa |

## PROPERTIES

| | |
|---|---|
| **AA Sequence** | N W V N V I S D L K K I E D L I Q S M H I D A T L Y T E S D V H P S C K V T A M<br>K C F L L E L Q V I S L E S G D A S I H D T V E N L I I L A N N S L S S N G N V<br>T E S G C K E C E E L E E K N I K E F L Q S F V H I V Q M F I N T S L E |
| **Biological Activity** | 1.Measure by its ability to induce MO7e human megakaryocytic leukemic proliferation. The $ED_{50}$ for this effect is 0.5-3 ng/mL. The specific activity of recombinant human IL15 is approximately 1.5 x $10^8$ IU/mg.<br>2. Measure by its ability to induce NK cells proliferation. The $ED_{50}$ for this effect is 5-35 ng/mL. |
| **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. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **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** | IL-15 Protein assumes a pivotal role in orchestrating inflammatory and protective immune responses against microbial invaders and parasites, modulating immune cells across both the innate and adaptive immune systems. This cytokine stimulates the proliferation of natural killer cells, T-cells, and B-cells, while also promoting the secretion of various cytokines. Notably, IL-15, unlike most cytokines, is expressed on the surface of IL-15-producing cells in association with its high-affinity receptor IL15RA, delivering signals to target cells expressing IL2RB and IL2RG receptor subunits. Upon binding to its receptor, IL-15 triggers the phosphorylation of JAK1 and JAK3, recruiting and subsequently phosphorylating signal |

transducer and activator of transcription-3/STAT3 and STAT5. In monocytes, IL-15 induces the production of IL8 and monocyte chemotactic protein 1/CCL2, attracting neutrophils and monocytes to infection sites. Additionally, in mast cells, IL-15 induces rapid tyrosine phosphorylation of STAT6, exerting control over mast cell survival and the release of cytokines such as IL4.



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