

Animal-Free IL-15 Protein, Mouse (His)

Cat. No.:	HY-P700193AF
Synonyms:	Interleukin-15; IL-15; IL15
Species:	Mouse
Source:	E. coli
Accession:	P48346 (N49-S162)
Gene ID:	16168
Molecular Weight:	Approximately 14.06 kDa

PROPERTIES

AA Sequence	NWIDVRYDLE KIESLIQSIH IDTTLYTDSD FHPSCKVTAM NCFLLLELQVI LHEYSNMTLN ETVRNVLYLA NSTLSSNKNV AESGCKECE E LEEKTFTEFL QSFIRIVQMF INTS
Biological Activity	Measure by its ability to induce CTLL-2 cells proliferation. The ED ₅₀ for this effect is < 10 ng/mL. The specific activity of recombinant mouse IL-15 is approximately > 1x10 ⁵ IU/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 1X PBS, pH 7.4.
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-15 protein is a cytokine that plays a crucial role in the development of both inflammatory and protective immune responses against microbial invaders and parasites. It achieves this by modulating immune cells from both the innate and adaptive immune systems. IL-15 stimulates the proliferation and activation of natural killer cells, T-cells, and B-cells, while also promoting the secretion of various cytokines. In monocytes, IL-15 induces the production of chemokines IL8 and monocyte chemoattractant protein 1/CCL2, which attract neutrophils and monocytes to sites of infection. Unlike most cytokines, IL-15 is expressed on the surface of IL-15-producing cells in association with its high affinity IL15RA, delivering signals to target cells expressing IL2RB and IL2RG receptor subunits. This binding triggers phosphorylation of JAK1 and
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JAK3, recruiting and subsequently phosphorylating signal transducer and activator of transcription-3/STAT3 and STAT5. Additionally, in mast cells, IL-15 rapidly phosphorylates STAT6, consequently controlling mast cell survival and the release of cytokines like IL4.

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