

Animal-Free IL-18 Protein, Mouse (His)

Cat. No.:	HY-P70642AF
Synonyms:	Interleukin-18; IL18; Interferon gamma-inducing factor; IFN-gamma-inducing factor; Interleukin-1 gamma; IL-1 gamma; Igif
Species:	Mouse
Source:	E. coli
Accession:	P70380 (N36-S192)
Gene ID:	16173
Molecular Weight:	Approximately 19.1 kDa

PROPERTIES

AA Sequence	<p>M N F G R L H C T T A V I R N I N D Q V L F V D K R Q P V F E D M T D I D Q S A</p> <p>S E P Q T R L I I Y M Y K D S E V R G L A V T L S V K D S K M S T L S C K N K I</p> <p>I S F E E M D P P E N I D D I Q S D L I F F Q K R V P G H N K M E F E S S L Y E</p> <p>G H F L A C Q K E D D A F K L I L K K K D E N G D K S V M F T L T N L H Q S</p>
Biological Activity	Measure by its ability to induce IFN gamma secretion in KG-1 cells. The ED ₅₀ for this effect is <0.5 µg/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.
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	<p>IL-18 Protein is a pro-inflammatory cytokine that plays a crucial role in epithelial barrier repair and the modulation of immune responses by polarizing T-helper 1 (Th1) cells and natural killer (NK) cells. Upon binding to its receptors IL18R1 and IL18RAP, IL-18 forms a signaling ternary complex that activates NF-kappa-B, leading to the synthesis of inflammatory mediators. It synergizes with IL-12/interleukin-12 to induce the synthesis of IFNG from Th1 cells and NK cells. IL-18 is also involved in transducing inflammation downstream of pyroptosis, where its mature form is specifically released into the extracellular space through the gasdermin-D (GSDMD) pore. At the plasma membrane, IL-18 forms a ternary complex with IL18R1 and IL18RAP, with IL18 first binding to IL18R1 to form a low affinity binary complex, which then interacts with</p>
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IL18RAP to form a high affinity ternary complex that signals within the cell. Additionally, IL-18 interacts with the cargo receptor TMED10 to facilitate its translocation from the cytoplasm to the endoplasmic reticulum-Golgi intermediate compartment (ERGIC) for secretion.

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

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