

IL-18 Protein, Human (N-His)

Cat. No.:	HY-P70591A
Synonyms:	Interleukin-18; Iboctadecin; Interferon gamma-inducing factor; IFN-gamma-inducing factor; Interleukin-1 gamma; IL-1 gamma; GIF; IL-18; IL-1g; IL1F4; MGC12320; IL18
Species:	Human
Source:	E. coli
Accession:	Q14116 (Y37-D193)
Gene ID:	3606
Molecular Weight:	Approximately 20 kDa

PROPERTIES

AA Sequence	<p> Y F G K L E S K L S V I R N L N D Q V L F I D Q G N R P L F E D M T D S D C R D N A P R T I F I I S M Y K D S Q P R G M A V T I S V K C E K I S T L S C E N K I I S F K E M N P P D N I K D T K S D I I F F Q R S V P G H D N K M Q F E S S S Y E G Y F L A C E K E R D L F K L I L K K E D E L G D R S I M F T V Q N E D </p>
Biological Activity	Induction of IFN-gamma by KG-1 cell in response to the recombinant human IL-18.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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 with pivotal roles in epithelial barrier repair and orchestrating polarized immune responses involving T-helper 1 (Th1) cells and natural killer (NK) cells. Upon binding to 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 to induce IFNG synthesis in Th1 cells and NK cells. Notably, IL-18 is involved in transduction of inflammation downstream of pyroptosis, where its mature form is released into the extracellular milieu by passing through the gasdermin-D (GSDMD) pore. At the plasma membrane, IL-18 forms a ternary complex with the ligand-binding receptor</p>
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subunit IL18R1 and signaling receptor subunit IL18RAP, initiating intracellular signaling. Additionally, IL-18 interacts with the cargo receptor TMED10, facilitating its translocation from the cytoplasm into the endoplasmic reticulum-Golgi intermediate compartment (ERGIC) and subsequent secretion.

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

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