

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

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| Cat. No.: | HY-P700108AF |
| Synonyms: | Interleukin-18; Iboctadekin; 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 19.2 kDa |

PROPERTIES

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| AA Sequence | <pre> M 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 </pre> |
| Biological Activity | Measure by its ability to induce IFN gamma secretion in KG-1 cells. The ED ₅₀ for this effect is <5 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. |
| 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

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| 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 subunit IL18R1 and signaling receptor subunit IL18RAP, initiating intracellular signaling. Additionally, IL-18 interacts with</p> |
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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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