

Animal-Free IL-37 Protein, Human (His)

Cat. No.:	HY-P700128AF
Synonyms:	Interleukin-37; FIL1 Zeta; IL-1X; Interleukin-1 Family Member 7; IL-1F7; Interleukin-1 Homolog 4; IL-1H; IL-1H4; Interleukin-1 Zeta; IL-1 Zeta; Interleukin-1-Related Protein; IL-1RP1; Interleukin-23; IL-37; IL37; FIL1Z; IL1F7; IL1H4; IL1RP1
Species:	Human
Source:	E. coli
Accession:	Q9NZH6 (K53-D218)
Gene ID:	27178
Molecular Weight:	Approximately 19.49 kDa

PROPERTIES

AA Sequence	<pre> M K N L N P K K F S I H D Q D H K V L V L D S G N L I A V P D K N Y I R P E I F F A L A S S L S S A S A E K G S P I L L G V S K G E F C L Y C D K D K G Q S H P S L Q L K K E K L M K L A A Q K E S A R R P F I F Y R A Q V G S W N M L E S A A H P G W F I C T S C N C N E P V G V T D K F E N R K H I E F S F Q P V C K A E M S P S E V S D </pre>
Biological Activity	Measure by its ability to induce IL-8 secretion in human PBMCs. The ED ₅₀ for this effect is <0.9 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-37 Protein, an immune regulatory cytokine, plays a pivotal role as a suppressor of innate inflammatory and immune responses, mitigating excessive inflammation. Signaling occurs through two distinct mechanisms: intracellularly via nuclear translocation with SMAD3 and extracellularly after secretion and binding to its receptor, composed of IL18R1 and IL18RAP. IL-37 suppresses or reduces the production of pro-inflammatory cytokines, including IL1A, IL6, CCL12, CSF1, CSF2, CXCL13, IL1B, IL23A, and IL1RN, while sparing anti-inflammatory cytokines. It also inhibits dendritic cell activation. IL-37 interacts with SMAD3 and binds IL18R1, albeit with lower affinity than IL18, without acting as a receptor antagonist for IL18.</p>
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Additionally, it forms a complex with the cargo receptor TMED10, facilitating 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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