

Animal-Free IL-36 gamma/IL-1F9 Protein, Human (His)

Cat. No.:	HY-P75861AF
Synonyms:	IL-36 gamma; IL-36γ; Interleukin-36 gamma; IL36G; IL-1-related protein 2; IL-1RP2; IL-1 epsilon; IL-1F9; Interleukin-1 homolog 1; IL-1H1
Species:	Human
Source:	E. coli
Accession:	Q9NZH8 (S18-D169)
Gene ID:	56300
Molecular Weight:	Approximately 17.98 kDa

PROPERTIES

AA Sequence	<pre> M S M C K P I T G T I N D L N Q Q V W T L Q G Q N L V A V P R S D S V T P V T V A V I T C K Y P E A L E Q G R G D P I Y L G I Q N P E M C L Y C E K V G E Q P T L Q L K E Q K I M D L Y G Q P E P V K P F L F Y R A K T G R T S T L E S V A F P D W F I A S S K R D Q P I I L T S E L G K S Y N T A F E L N I N D </pre>
Biological Activity	Measure by its ability to induce IL-8 secretion in A431 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

Background	<p>IL-36 gamma/IL-1F9 protein, a cytokine, binds to and signals through the IL1RL2/IL-36R receptor, activating NF-kappa-B and MAPK signaling pathways in target cells, thereby contributing to a pro-inflammatory response. As a vital component of the IL-36 signaling system believed to be present in epithelial barriers, IL-36 gamma shares similarities with the IL-1 system and utilizes the coreceptor IL1RAP. It appears to be integral to skin inflammatory responses, exerting influence on keratinocytes, dendritic cells, and indirectly impacting T-cells, thereby driving tissue infiltration, cell maturation, and proliferation. In cultured keratinocytes, IL-36 gamma induces the expression of various chemokines, including CCL3, CCL4, CCL5, CCL2, CCL17, CCL22, CL20, CCL5, CCL2, CCL17, CCL22, CXCL8, CCL20, and CXCL1. Additionally, IL-36 gamma stimulates its own</p>
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expression and that of prototypic cutaneous pro-inflammatory parameters such as TNF-alpha, S100A7/psoriasin, and inducible NOS. It may play a role in pro-inflammatory responses during specific neutrophilic airway inflammation, activating mitogen-activated protein kinases and NF-kappa B in primary lung fibroblasts and stimulating the expression of IL-8, CXCL3, and Th17 chemokine CCL20 in lung fibroblasts. IL-36 gamma might also be involved in the innate immune response to fungal pathogens, such as *Aspergillus fumigatus*. Interacting with the cargo receptor TMED10, IL-36 gamma undergoes translocation from the cytoplasm into the endoplasmic reticulum-Golgi intermediate compartment (ERGIC), facilitating secretion.

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

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