

## Recombinant Human Interleukin-36 gamma, 152aa

### (Human IL-36 $\gamma$ ,152aa)

#### Product Information

Product Name	Cat#	Size
	90129ES10	10 $\mu$ g
Recombinant Human Interleukin-36 gamma, 152aa (Human IL-36 $\gamma$ ,152aa)	90129ES60	100 $\mu$ g
	90129ES76	500 $\mu$ g

#### Product Description

IL-36 gamma previously called IL-1F9, IL-1 epsilon (epsilon), and IL-1H1 is a member of the IL-1 family which includes IL-1 beta, IL-1 alpha, IL-1ra, IL-18, IL-36 Ra (IL-1F5), IL-36 alpha (IL-1F6), IL-36 beta (IL-1F8), IL-37 (IL-1F7) and IL-1F10. All family members show a 12 beta-strand, beta-trefoil configuration, and are believed to have arisen from a common ancestral gene. IL-36 gamma is an 18-22 kDa, 169 aa intracellular and secreted protein that contains no signal sequence, no prosegment and no potential N-linked glycosylation sites. Human IL-36 gamma (aa 18-169) shares 58%, 59%, 68% and 69% aa sequence identity with mouse, rat, bovine and equine IL-36 gamma, respectively, and 23-57% aa sequence identity with other family members. 134 aa isoform missing aa 19-53 has been reported. Highest levels of IL-36 gamma are produced by Langerhans cells, keratinocytes, and stomach Chief cells and parietal cells; these cells contribute to first-line defense against pathogens in the skin, lungs and digestive tract. Its expression is induced by LPS treatment of monocytes, and by IL-1 alpha / beta, IL-17 or TNF-1 alpha treatment of keratinocytes and bronchial epithelia. Skin IL-36 gamma expression is increased in contact hypersensitivity and psoriasis. It is elevated in inflammatory disorders of the lung (such as asthma) and viral infections. Lung IL-36 gamma and other IL-36 proteins contribute to neutrophil influx. The receptor for IL-36 gamma is a combination of IL-1 Rrp2, mainly found in epithelia and keratinocytes, and the widely expressed IL-1 RAcP. IL-36 alpha, beta and gamma all activate NF-kappa B and MAPK pathways in an IL-1 Rrp2 dependent manner, and IL-36 gamma induces production of inflammatory cytokines and chemokines such as CXCL8/IL-8.

#### Product Properties

<b>Synonyms</b>	IL-1RP2, IL-1 epsilon, IL-1F9, IL-1H1
<b>Accession</b>	Q9NZH8
<b>GeneID</b>	56300
<b>Source</b>	E.coli-derived human Interleukin-36 gamma protein, Ser18-Asp169.
<b>Molecular Weight</b>	Approximately 17.0 kDa.
<b>AA Sequence</b>	SMCKPITGTI NDLNQQVWTL QGQNLVAVPR SDSVTPVTVA VITCKYPEAL EQGRGDPIYL GIQNPEMCLY CEKVGEQPTL QLKEQKIMDL YGQPEPVKPF LFYRAKTGRT STLESVAFPD WFIASSKRDQ PIILTSELGK SYNTAFELNI ND
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 95% by SDS-PAGE and HPLC analyses. Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by its ability to induce IL-8 secretion by human preadipocytes is less than 10 ng/ml, corresponding to a specific activity of > 1 × 10 <sup>5</sup> IU/mg.
<b>Biological Activity</b>	
<b>Endotoxin</b>	< 1.0 EU per 1 $\mu$ g of the protein by the LAL method.

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<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

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### Shipping and Storage

The products are shipped with ice pack and can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

### Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.