

## Recombinant Human Interleukin-36 alpha, 153aa (Human IL-36 $\alpha$ ,153aa)

### Product Information

Product Name	Cat#	Size
	90125ES10	10 $\mu$ g
Recombinant Human Interleukin-36 alpha, 153aa (Human IL-36 $\alpha$ ,153aa)	90125ES60	100 $\mu$ g
	90125ES76	500 $\mu$ g

### Product Description

Human IL-36 alpha, previously called IL-1F6 and FIL1 epsilon (family of IL-1 member epsilon), is a member of the IL-1 family which includes IL-1 beta, IL-1 alpha, IL-1ra, IL-18, and novel family members IL-36 Ra (IL-1F5), IL-36 beta (IL-1F8), IL-36 gamma (IL-1F9), IL-37 (IL-1F7) and IL-38 (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 alpha is an 18-22 kDa, 158 amino acid (aa) intracellular and secreted protein that contains no signal sequence, no prosegment and no potential from N-linked glycosylation sites. It can be released in response to LPS and the cell ATP-induced activation of the P2X7 receptor. A 120 aa isoform missing aa 1-38 has been reported. Human IL-36 alpha (aa 6 - 158) shares 57-68% aa sequence identity with mouse, rabbit, equine and bovine IL-36 alpha and 27-57% aa sequence identity with other novel IL-1 family members. IL-36 alpha is mainly found in skin and lymphoid tissues, but also in fetal brain, trachea, stomach and intestine. It is expressed by monocytes, B and T cells. The receptor for IL-36 alpha is a combination of IL-1 Rrp2 (also called IL1RL2 or IL-1 R6), 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 induce production of inflammatory cytokines and chemokines such as CXCL8/IL-8. IL-36 alpha and other family members are overexpressed in psoriatic skin lesions, and transgenic overexpression of IL-36 alpha in skin keratinocytes produces epidermal hyperplasia. IL-36 alpha is present in kidney tubule epithelia, and it is highly expressed in intubulointerstitial lesions in mouse models of chronic glomerulonephritis, lupus nephritis and diabetic nephritis.

### Product Properties

<b>Synonyms</b>	FIL1 epsilon, IL-1 epsilon, IL-1F6, IL-1H1
<b>Accession</b>	Q9UHA7
<b>GeneID</b>	27179
<b>Source</b>	E.coli-derived human Interleukin-36 alpha protein, Lys6-Phe158.
<b>Molecular Weight</b>	Approximately 17.1 kDa.
<b>AA Sequence</b>	KIDTPQQGSI QDINHRVWVL QDQTLIAVPR KDRMSPVTIA LISCRHVETL EKDRGNPIYL GLNGLNLCLM CAKVGDPQTL QLKEKDIMDL YNQPEPVKSF LFYHSQSGRN STFESVAFPG WFIASSEGG CPLILTQELG KANTTDFGLT MLF
<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.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by inducing IL-8 secretion in human preadipocytes is less than 10 ng/ml, corresponding to a specific activity of > 1.0 × 10 <sup>5</sup> IU/mg.

<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris, 300 mM NaCl, pH 8.0, 0.1% Tween 80.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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 ≤ -20°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°C to -80°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.