

Recombinant Human Interleukin-36 alpha, 158aa (Human IL-36 alpha, 158aa)

Product Information

Product Name	Cat#	Size
	90124ES10	10 µg
Recombinant Human Interleukin-36 alpha, 158aa (Human IL-36 alpha, 158aa)	90124ES60	100 µg
	90124ES76	500 µg

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

Synonyms	FIL1 epsilon, IL-1 epsilon, IL-1F6, IL-1H1
Accession	Q9UHA7
GeneID	27179
Source	E.coli-derived human IL-36 alpha protein, Met1-Phe158.
Molecular Weight	Approximately 17.7 kDa.
AA Sequence	MEKALKIDTP QQGSIQDINH RVWVLQDQTL IAVPRKDRMS PVTIALISCR HVETLEKDRG NPIYLGLNGL NLCLMCAKVG DQPTLQLKEK DIMDLYNQPE PVKSFLFYHS QSGRNSTFES VAFPGWFIIV SSEGGCPILIL TQELGKANTT DFGLTMLF
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 95% by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The specific activity determined by its ability in a functional ELISA. Immobilized rHuIL-36α at 1 µg/mL can bind recombinant human IL-1 Rrp2 Fc Chimera with a range of 0.15-5 µg/mL.

Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 2 × PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	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.

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.