

Recombinant Mouse Interleukin-36 alpha, 160aa (Mouse IL-36 α ,160aa)

Product Information

Product Name	Cat#	Size
	90158ES10	10 μ g
Recombinant Mouse Interleukin-36 alpha, 160aa (Mouse IL-36 α ,160aa)	90158ES60	100 μ g
	90158ES76	500 μ g

Product Description

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-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 kDa, 160 amino acid (aa) intracellular and secreted protein that contains no signal sequence, no prosegment and no potential N-linked glycosylation sites. It can be externalized non-specifically in response to LPS and ATP-induced activation of the P2X7 receptor. Full-length recombinant IL-36 alpha is less active than endogenous IL-36 alpha, but trimming of the N-termini enhances its activity. Mouse IL-36 alpha shares 83% aa sequence identity with rat IL-36 alpha, 54-60% with human, 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 IL-1 RL2 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- κ 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; it is highly overexpressed in tubulointerstitial lesions in mouse models of chronic glomerulonephritis, lupus nephritis and diabetic nephritis. IL-36 alpha is induced by inflammation in adipose tissue-resident alternately activated (M2) macrophages, and reduces adipocyte differentiation.

Product Properties

Synonyms	FIL1 epsilon, IL-1 epsilon, IL-1F6, IL-1H1
Accession	Q9JLA2
GeneID	54448
Source	E.coli-derived Mouse IL-36 α ,160aa, Met1-His160, with an N-terminal Met.
Molecular Weight	Approximately 18.0 kDa.
AA Sequence	MNKEKELRAA SPSLRHVQDL SSRVWILQNN ILTAVPRKEQ TVPVITITLLP CQYLDITLETN RGDPTYMGVQ RPMSCLFCTK DGEQPVLQLG EGNIMEMYNK KEPVKASLFY HKKSGTTSTF ESAAFPGWFI AVCSKGSCPL ILTQELGEIF ITDFEMIVVH
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 95% by SDS-PAGE and HPLC analyses.

Biological Activity	The specific activity determined by its ability in a functional ELISA. Immobilized rMuIL-36 α at 1 μ g/mL can bind recombinant murine IL-1 Rrp2 with a range of 0.15-5 μ g/mL. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1 μ g of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4, 5 % trehalose. 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 \leq -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!