

Recombinant Mouse Interleukin-36 beta, 153aa

(Mouse IL-36 β , 153aa)

Product Information

Product Name	Cat#	Size
Recombinant Mouse Interleukin-36 beta, 153aa (Mouse IL-36 β , 153aa)	90161ES10	10 μ g
	90161ES60	100 μ g
	90161ES76	500 μ g

Product Description

Mouse interleukin-36 beta [IL-36 beta ; previously IL-1F8, FIL-1 eta(eta) and IL-1H2] is a member of the IL-1 family of proteins that includes IL-1 beta, IL-1 alpha, IL-1ra, IL-18, IL-36Ra/IL-1F5, IL-36 alpha /IL-1F6, IL-37/IL-1F7, IL-36 gamma /IL-1F9 and IL-1F10. All family members show a 12 beta-stranded beta-trefoil configuration, share up to 50% amino acid (aa) sequence identity, and are believed to have arisen from a common ancestral gene. Although two alternatively spliced transcript variants for human IL-36 beta /IL-1F8 have been described, to date, only one mouse IL-36 beta /IL-1F8 isoform is known. Mouse IL-36 beta /IL-1F8 shares 61% and 74% aa identity with human IL-36 beta isoform 2 and rat IL-36 beta, respectively. IL-36 beta is agonistic, stimulating release of inflammatory mediators such as IL-6 and IL-8, and cytotoxic peptides such as beta-defensins 2 and 3 that aid in defense against microbial pathogens. The receptor for IL-36 proteins is IL-1 Rrp2, with IL-1 RAcP as a coreceptor. Antagonism of IL-36 proteins by IL-36Ra, which also binds IL-1 Rrp2, has been shown by some investigators. Skin keratinocytes express highest levels of IL-36 proteins and their receptors, followed by epithelia in the esophagus, trachea and bronchae. IL-36 beta expression is increased in psoriatic skin and may play a role in pathogenesis of psoriasis. IL-36 beta is also expressed in resting and activated monocytes and B cells, synovial fibroblasts, neurons and glia, and is detectable in plasma and body fluids. IL-36 beta, along with IL-36 alpha and IL-36 gamma, is up-regulated by IL-1 alpha and TNF- alpha in keratinocytes, and has been shown to activate NF- kappa B and MAPK signaling pathways in an IL-1 Rrp2-dependent manner. Full-length recombinant IL-36 proteins appear less active than their endogenous counterparts, but trimming of the N-termini enhances their activity.

Product Properties

Synonyms	FIL1 eta, IL-1 eta, IL-1F8, IL-1H2
Accession	Q9D6Z6
GeneID	69677
Source	E.coli-derived Mouse IL-36 β , 153aa, Ser31-Lys183.
Molecular Weight	Approximately 17.4 kDa.
AA Sequence	SSQSPRNYRV HDSQQMVWVL TGNTLTAVPA SNNVKPVILS LIACRDTEFQ DVKKGNLVFL GIKNNRLCFC CVEMEGKPTL QLKEVDIMNL YKERKAQKAF LFYHGIEGST SVFQSVLYPG WFIATSSIER QTIILTHQRG KLVNTNFYIE SEK
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE and HPLC analyses.

Biological Activity	The ED ₅₀ as determined by inducing IL-6 secretion in murine NIH/3T3 cells is less than 10 ng/mL, corresponding to a specific activity of $> 1.0 \times 10^5$ IU/mg. 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 $\leq -20^\circ\text{C}$. 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!