Recombinant IL36B protein (His tag)

Catalog Number	543777
Synonyms	FIL1 eta; Interleukin-1 eta; IL-1 eta; Interleukin-1 family member 8; IL-1F8; Interleukin-1 homolog 2; IL-1H2
Species	Human
Expression System	E. coli
Accession	Q9NZH7
Molecular Weight	Predictes a molecular mass of 10.99 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	5-88
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 5-88 aa (Q9NZH7) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This product is a recombinant fragment of Human Interleukin-36 beta (IL-36B), encompassing amino acids 5-88. IL-36B is a key pro-inflammatory cytokine that activates NF-kappa-B and MAPK signaling pathways through the IL1RL2/IL-36R receptor. This 84-amino acid fragment has been computationally selected for optimal stability and solubility, making it ideal for structural studies, biochemical assays, and inflammatory pathway research. Interleukin-36 beta (IL-36B) is a cytokine that binds to the IL1RL2/IL-36R receptor, activating NF-kappa-B and MAPK signaling pathways to drive pro-inflammatory responses. As part of the IL-36 signaling system, it functions in epithelial barriers and contributes to local inflammatory processes, sharing similarities with the IL-1 system through the coreceptor IL1RAP. IL-36B stimulates production of interleukin-6 and interleukin-8 in various cell types including synovial fibroblasts, articular chondrocytes, and mature adipocytes. It induces expression of antimicrobial peptides such as beta-defensins and matrix metalloproteases, and plays a crucial role in skin inflammatory responses by acting on keratinocytes, dendritic cells, and T-cells to promote tissue infiltration, cell maturation, and proliferation. In keratinocytes, it stimulates production of multiple chemokines (CCL3, CCL4, CCL5, CCL2, CCL17, CCL22, CXCL8, CCL20, CXCL1) and pro-inflammatory cytokines including TNF-alpha, IL-8, and IL-6. The protein is primarily localized in the cytoplasm and is secreted through a process dependent on protein unfolding facilitated by the cargo receptor TMED10, involving translocation from the cytoplasm into the ERGIC followed by vesicle-mediated secretion.