Recombinant IL-36β/IL-1F8
Catalog Number: 6834-ILB/CF

**DESCRIPTION**

**Source**  
E. coli-derived  
Arg5-Glu157  
Accession # NP_775270

**N-terminal Sequence Analysis**  
Arg5

**Predicted Molecular Mass**  
17 kDa

**SPECIFICATIONS**

**SDS-PAGE**  
17 kDa, reducing conditions

**Activity**  
Measured by its ability to induce IL-8 secretion in human preadipocytes. van Asseldonk, E.J. et al. (2010) Obesity **18:**2234.  
The ED50 for this effect is typically 1.5-7.5 ng/mL.

**Endotoxin Level**  
<0.10 EU per 1 μg of the protein by the LAL method.

**Purity**  
>95%, by SDS-PAGE with silver staining.

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS. See Certificate of Analysis for details.

**Shipment**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage**  
- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Interleukin-36 beta (IL-36β), previously known as IL-1F8, FIL-1η (eta) and IL-1H2, is a member of the IL-1 family of proteins that also includes IL-1α, IL-1β, IL-18, IL-36Ra/IL-1F5, IL-36β/IL-1F8, IL-37/IL-1F7, IL-36γ/IL-1F9, and IL-1F10 (1, 2). IL-1 family cytokines are characterized by a 12 β-stranded β-trefoil configuration and share up to 50% amino acid (aa) sequence identity. The 157 aa human IL-36β does not have a canonical signal peptide or prosegment and is expressed as two isoforms that differ in their C-terminal 70 aa. IL-36β1 lacks four of the conserved β-strands common to the IL-1 family (3). Human IL-36β2 shares 62%, 67%, 63% and 59% aa identity with the most similar isoforms of mouse, canine, bovine and equine IL-36β, respectively (4). IL-36β is expressed by keratinocytes, naive CD4+ T cells, neurons, and glia (5-7). It is up-regulated in keratinocytes and synovial fibroblasts by inflammatory stimulation and in psoriatic lesions (5, 8, 9). IL-36β promotes inflammatory responses by enhancing the activation and Th1 polarization of dendritic cells and T cells (7, 10, 11). It also enhances the production of multiple pro-inflammatory cytokines, chemokines, and anti-bacterial defensin peptides by keratinocytes, synovial fibroblasts, and articular chondrocytes (5, 8-10). IL-36 proteins exert their bioactivity through a receptor complex that contains IL-1Rrp2 and IL-1RacP, and this is antagonized by IL-36Ra which also binds IL-1 Rrp2 (11, 12). The potency of IL-36β is increased by cleavage of its first four N-terminal amino acids (13).

**References:**


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