

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 A431 human epithelial carcinoma cells.
The ED₅₀ for this effect is 0.8-4.8 ng/mL.

Endotoxin Level <0.10 EU per 1 μ g of the protein by the LAL method.

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

Formulation Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose.
See Certificate of Analysis for details.

PREPARATION AND STORAGE

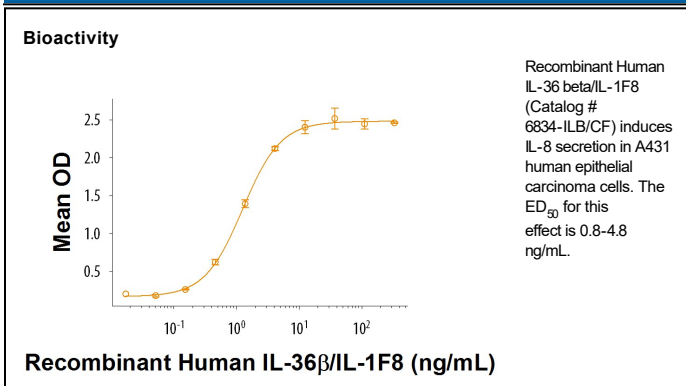
Reconstitution Reconstitute at 100 μ g/mL in PBS.

Shipping The product is shipped with polar packs. 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.

DATA



BACKGROUND

Interleukin-36 beta (IL-36 β , previously known as IL-1F8, FIL-1 η (eta) and IL-1H2, is a member of the IL-1 family of proteins that also includes IL-1 β , IL-1 α , IL-1ra, IL-18, IL-36Ra/IL-1F5, IL-36 α /IL-1F6, IL-37/IL-1F7, IL-36 γ /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-36 β does not have a canonical signal peptide or prosegment and is expressed as two isoforms that differ in their C-terminal 70 aa. IL-36 β 1 lacks four of the conserved β -strands common to the IL-1 family (3). Human IL-36 β 2 shares 62%, 67%, 63% and 59% aa identity with the most similar isoforms of mouse, canine, bovine and equine IL-36 β , respectively (4). IL-36 β is expressed by keratinocytes, naïve 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-36 β 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-1 Rrp2 and IL-1 RAcP, and this is antagonized by IL-36Ra which also binds IL-1 Rrp2 (11, 12). The potency of IL-36 β is increased by cleavage of its first four N-terminal amino acids (13).

References:

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