

DESCRIPTION

Source *E. coli*-derived
Lys6-Phe158
Accession # NP_055255

N-terminal Sequence Analysis Lys6

Structure / Form Monomer

Predicted Molecular Mass 17 kDa

SPECIFICATIONS

SDS-PAGE 16 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 4-24 ng/mL.

Endotoxin Level <0.01 EU per 1 μ g of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 μ m filtered solution in Tris, NaCl, TCEP, EDTA and Tween® 20 with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 μ g/mL in Water.

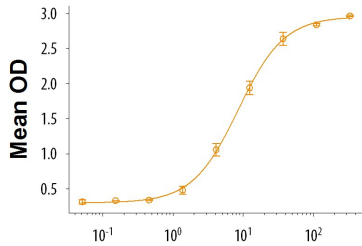
Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

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

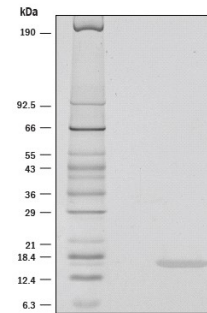
Bioactivity



Recombinant Human IL-36 α /IL-1F6 (Catalog # 6995-IL) induces IL-8 secretion in A431 human epithelial carcinoma cells. The ED₅₀ for this effect is 4-24 ng/mL.

Recombinant Human IL-36 α /IL-1F6 (ng/mL)

SDS-PAGE



1 μ g/lane of Recombinant Human IL-36 α /IL-1F6 (aa 6-158) was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 16 kDa.

BACKGROUND

Human IL-36 α , previously called IL-1F6 and FIL1 ϵ (family of IL-1 member epsilon), is a member of the IL-1 family which includes IL-1 β , IL-1 α , IL-1ra, IL-18, and novel family members IL-36 Ra (IL-1F5), IL-36 β (IL-1F8), IL-36 γ (IL-1F9), IL-37 (IL-1F7) and IL-38 (IL-1F10) (1-4). All family members show a 12 β -strand, β -trefoil configuration, and are believed to have arisen from a common ancestral gene (1, 2). IL-36 α is an 18-22 kDa, 158 amino acid (aa) intracellular and secreted protein that contains no signal sequence, no prosegment and no potential from N-linked glycosylation sites (1-3). It can be released in response to LPS and the cell ATP-induced activation of the P2X7 receptor (5). A 120 aa isoform missing aa 1-38 has been reported (6). Human IL-36 α (aa 6 - 158) shares 57-68% aa sequence identity with mouse, rabbit, equine and bovine IL-36 α and 27-57% aa sequence identity with other novel IL-1 family members. IL-36 α is mainly found in skin and lymphoid tissues, but also in fetal brain, trachea, stomach and intestine (1, 3, 7). It is expressed by monocytes, B and T cells (1, 2). The receptor for IL-36 α is a combination of IL-1 Rrp2 (also called IL1RL2 or IL-1 R6), mainly found in epithelia and keratinocytes, and the widely expressed IL-1 RAcP (3, 7). IL-36 α , β , and γ 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 (7). IL-36 α and other family members are overexpressed in psoriatic skin lesions, and transgenic overexpression of IL-36 α in skin keratinocytes produces epidermal hyperplasia (7-9). IL-36 α is present in kidney tubule epithelia, and it is highly expressed in intubulointerstitial lesions in mouse models of chronic glomerulonephritis, lupus nephritis and diabetic nephritis (10).

References:

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4. Dinarello, C. *et al.* (2010) *Nat. Immunol.* **11**:973.
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6. Entrez Accession # EAW73614.
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