



Interleukin-36 alpha, human recombinant (rHuIL-36alpha)

Catalog No: 97511
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interleukin 36 alpha, FIL1E, IL1F6, FIL1, IL1(EPSILON), interleukin 1 family member 6 (epsilon), MGC129552, MGC129553

Background

Human IL-36a belongs to the IL-1 family which includes IL-1b, IL-1a, IL-1ra, IL-18, IL-36ra (IL1F5), IL-36b (IL1F8), IL-36g (IL1F9), IL-37 (IL1F7) and IL-38 (IL-1F10). The IL-1 family members display a 12 b-strand, b-trefoil configuration, and are thought to have ascended from a mutual ancestral gene. IL-36a is an 18-22 kDa, 158aa intracellular and secreted protein which holds no signal sequence, no prosegment and no potential from N-linked glycosylation sites. IL-36a is released as a reaction to LPS and the cell ATP-induced activation of the P2X7 receptor. Human IL-36a (aa 6-158) shares 57-68% aa sequence homology with mouse, rabbit, equine and bovine IL-36a and 27-57% aa sequence homology with other new IL-1 family members. IL-36a is mostly found in skin and lymphoid tissues, but also in fetal brain, trachea, stomach and intestine.

Description

IL36A human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 153 amino acids (6-158) and having a molecular mass of 17.0 kDa. IL36A is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris-HCl, 150 mM NaCl, 0.1% Tween 20, pH 8.0.

Solubility

It is recommended to reconstitute the lyophilized IL36A in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized IL36A, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL36A should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

KIDTPQQGSI QDINHRVWVL QDQTLIAVPR KDRMSPVTIA LISCRHVETL EKDRGNPIYL GLNGLNLCIM CAKVGDQPTL
QLKEKDIMDL YNQPPEPVKSF LFYHSQSGRN STFESVAFPG WFIASVSEGG CPLILTQELG KANTTDFGLT MLF

Activity

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Fully biologically active when compared to standard. The ED50 as measured by its ability to induce IL-8 secretion in human preadipocytes is less than 10 ng/ml, corresponding to a specific activity of 100,000 IU/mg.

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.