Data Sheet (Cat.No.TMPY-02879)

TargetMol

IL-36 alpha/IL-1F6 Protein, Human, Recombinant (aa 6-158)

General Information

Synonyms:	interleukin 36, alpha;FIL1(ε);IL1(ε);IL1E;IL-1F6;FIL1E;IL1F6;IL1(EPSILON);FIL1;FIL1(EPSILON);IL36 α/IL-1F6;IL36A;FIL;1E;interleukin 36, α
Protein Construction:	A DNA sequence encoding the human IL1F6 (Q9UHA7) (Ala6-Phe158) was expressed and purified, with two additional amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Human
Expression Host:	E. coli
Accession:	Q9UHA7
Molecular Weight:	17 .2 kDa (predicted); 18 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to induce IL8 secretion in A431 human epithelial carcinoma cells. The ED50 for this effect is typically 5-20 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interleukin-1 family member 6 (IL-1F6), also known as interleukin 36, alpha (IL36A), is a pro-inflammatory cytokine that plays an important role in innate and adaptive immunity. IL-1F6 activates MAPK and NF-kB pathways and is produced by many different cells. This cytokine is a family member of interleukin-1 (IL-1) and plays an important

role in the pathophysiology of several diseases. It has been reported that IL-1F6 and IL-1F8, in addition to IL-1F9, activate the pathway leading to NF-kappaB in an IL-1Rrp2-dependent manner in Jurkat cells as well as in multiple other human and mouse cell lines. Activation of the pathway leading to NF-kappaB by IL-1F6 and IL-1F8 follows a similar time course to activation by IL-1beta, suggesting that signaling by the novel family members occurs through a direct mechanism. In a mammary epithelial cell line, NCI/ADR-RES, which naturally expresses IL-1Rrp2, all three cytokines signal without further receptor transfection. IL-1Rrp2 antibodies block activation of the pathway leading to NF-kappaB by IL-1F6, IL-1F8, and IL-1F9 in both Jurkat and NCI/ADR-RES cells. Thus IL-1F6, IL-1F8, and IL-1F9 signal through IL-1Rrp2 and IL-1RAcP.

Reference

Tripodi D,et al. (2012) IL-36 a new member of the IL-1 family cytokines. J Biol Regul Homeost Agents. 26(1):7-14.
Towne JE,et al. (2004) Interleukin (IL)-1F6, IL-1F8, and IL-1F9 signal through IL-1Rrp2 and IL-1RAcP to activate the pathway leading to NF-kappaB and MAPKs. J Biol Chem. 279(14): 13677-88.

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