

## IL-36 alpha/IL-1F6 Protein, Mouse, Recombinant (Active)

### General Information

Synonyms:	Fil1e;Il36a;Interleukin-36 alpha;Il1h1;Il1f6;IL-1 epsilon;IL-1H1;Il1e;IL-1F6
Protein Construction:	Arg8-His160
Species:	Mouse
Expression Host:	E. coli
Accession:	Q9JLA2
Molecular Weight:	17.1 kDa (Predicted)
AA Sequence:	RAASPSLRHV QDLSSRVWIL QNNILTAVPR KEQTVPVITIT LLPCQYLDLTL ETNRGDPTYM GVQRPMSCFLF CTKDGEQPVL QLGEGNIMEM YNKKEPVKAS LFYHKKSGTT STFESAAPFG WFIHAVCSKGS CPLILTQELG EIFITDFEMI VVH

### QC Testing

Biological Activity:	Fully biologically active when compared to standard. The ED50 as determined by inducing IL-6 secretion in murine NIH/3T3 cells is less than 25 ng/ml, corresponding to a specific activity of $> 4.0 \times 10^4$ IU/mg.
Purity:	$> 95\%$ as determined by SDS-PAGE; $> 95\%$ as determined by HPLC
Endotoxin:	$< 1.0$ EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, 1 mM DTT, 3% trehalose.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water or aqueous buffer containing 0.1 % BSA. The product concentration should not be less than 100  $\mu$ g/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at  $-80^{\circ}\text{C}$ . For reconstituted protein solutions, the solution can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  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-36 (IL-36) is a pro-inflammatory cytokine which plays an important role in the pathophysiology of several diseases. IL-36 $\alpha$ , IL-36 $\beta$ , and IL-36 $\gamma$  (formerly IL-1F6, IL-1F8, and IL-1F9) are IL-1 family members that signal through the IL-1 receptor family members IL-1Rrp2 (IL-1RL2) and IL-1RAcP. IL-36 $\alpha$  is mainly found in skin

and lymphoid tissues, but also in fetal brain, trachea, stomach and intestine. It is expressed by monocytes, B and T cells. Notably, IL-36 alpha is the only novel IL-1 family member expressed on T-cells. Recombinant murine interleukin-36 alpha contains 153 amino acids residues which is a single non-glycosylated polypeptide. Specifically, mouse IL-36 $\alpha$  shares 83 % a.a. sequence identity with rat IL-36 $\alpha$ , 54 - 60 % with human, rabbit, equine and bovine IL-36 $\alpha$ .

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