

## Recombinant Murine Interleukin-36 alpha, 160a.a.

### Information

|                     |  |
|---------------------|--|
| Gene ID             | 54448  |
| Accession #         | Q9JLA2   |
| Alternate Names     | FIL1 epsilon, IL-1 epsilon, IL-1F6, IL-1H1   |
| Source              | Escherichia coli.  |
| M.Wt                | Approximately 18.0 kDa, a single non-glycosylated polypeptide chain containing 160 amino acids.  |
| AA Sequence         | MNKEKELRAA SPSLRHVQDL SSRVWILQNN ILTAVPRKEQ TVPVTITLLP<br>CQYLDLTLETN RGDPTYMGVQ RPMSCLFCTK DGEQPVLLQG<br>EGNIMEMYNK KEPVKASLFY HKKSGTTSTF ESAAFPGWFI AVCSKGSCPL<br>ILTQELGEIF ITDFEMIVVH  |
| Appearance          | Sterile Filtered White lyophilized (freeze-dried) powder.  |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles<br>- 12 months from date of receipt, -20 to -70 °C as supplied<br>- 1 month, 2 to 8 °C under sterile conditions after reconstitution<br>- 3 months, -20 to -70 °C under sterile conditions after reconstitution   |
| Formulation         | Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4, 5 % trehalose.  |
| Reconstitution      | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions. |
| Biological Activity | Fully biologically active when compared to standard. The specific activity determined by its ability in a functional ELISA. Immobilized rMuIL-36α at 1 µg/mL can bind recombinant murine IL-1 Rrp2 with a range of 0.15-5 µg/mL.   |
| Shipping Condition  | Gel pack.  |
| Handling            | Centrifuge the vial prior to opening.  |
| Usage               | For Research Use Only! Not to be used in humans.   |

### Components and Storage

| Components                                       | 10µg | 100µg | 500µg |
|--|------|-------|-------|
| Recombinant Murine Interleukin-36 alpha, 160a.a. | 10µg | 100µg | 500µg |

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## Quality Control

|           |   |
|-----------|---|
| Purity    | > 95 % by SDS-PAGE and HPLC analyses.   |
| Endotoxin | Less than 1 EU/ $\mu$ g of rMuIL-36 $\alpha$ , 160a.a. as determined by LAL method. |

## Description

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 160 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  $\alpha$ .

## Reference

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2. Dinarello C, Arend W, Sims J, et al. 2010. Nat Immunol. 11:973
3. Barksby HE, Lea SR, Preshaw PM, et al. 2007. Clin Exp Immunol. 149:217-25
4. Smith DE, Renshaw BR, Ketchum RR, et al. 2000. J Biol Chem. 275:1169-75
5. Dunn E, Sims JE, Nicklin MJ, et al. 2001. Trends Immunol. 22:533-6.

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