

## DESCRIPTION

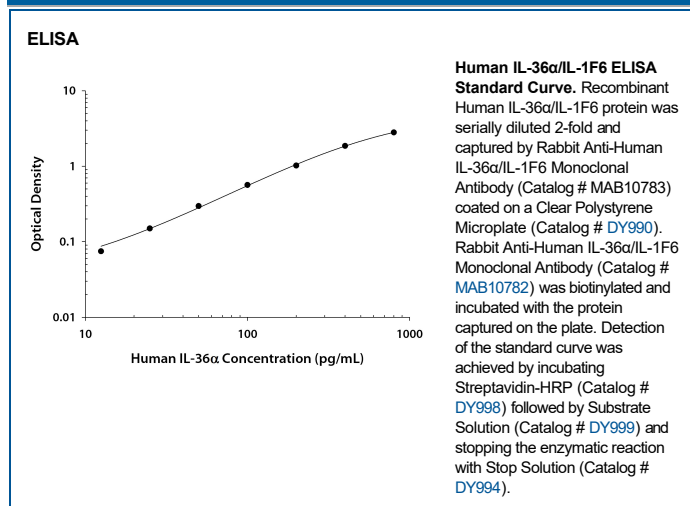
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-36 $\alpha$ / IL-1F6 in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Rabbit IgG Clone # 1087K
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived human IL-36 $\alpha$ /IL-1F6 Lys6-Phe158 Accession # NP_055255
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 $\mu$ m filtered solution in PBS.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

<b>ELISA</b>	<p>This antibody functions as an ELISA capture antibody when paired with Rabbit Anti-Human IL-36<math>\alpha</math>/IL-1F6 Monoclonal Antibody (Catalog # <a href="#">MAB10782</a>).</p> <p><i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human IL-36 <math>\alpha</math>/IL-1F6 DuoSet ELISA Kit (Catalog # <a href="#">DY1078-05</a>) for convenient development of a sandwich ELISA.</i></p>
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## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Human IL-36 $\alpha$ , previously called IL-1F6 and FIL1 $\epsilon$  (family of IL-1 member epsilon), is a member of the IL-1 family which includes IL-1 $\beta$ , IL-1 $\alpha$ , IL-1ra, IL-18, and novel family members IL-36 Ra (IL-1F5), IL-36 $\beta$  (IL-1F8), IL-36 $\gamma$  (IL-1F9), IL-37 (IL-1F7) and IL-38 (IL-1F10) (1-4). All family members show a 12  $\beta$ -strand,  $\beta$ -trefoil configuration, and are believed to have arisen from a common ancestral gene (1, 2). IL-36 $\alpha$  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 $\alpha$  (aa 6 - 158) shares 57-68% aa sequence identity with mouse, rabbit, equine and bovine IL-36 $\alpha$  and 27-57% aa sequence identity with other novel IL-1 family members. IL-36 $\alpha$  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 $\alpha$  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 $\alpha$ ,  $\beta$ , and  $\gamma$  all activate NF- $\kappa$ 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 $\alpha$  and other family members are overexpressed in psoriatic skin lesions, and transgenic overexpression of IL-36 $\alpha$  in skin keratinocytes produces epidermal hyperplasia (7-9). IL-36 $\alpha$  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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