

## DESCRIPTION

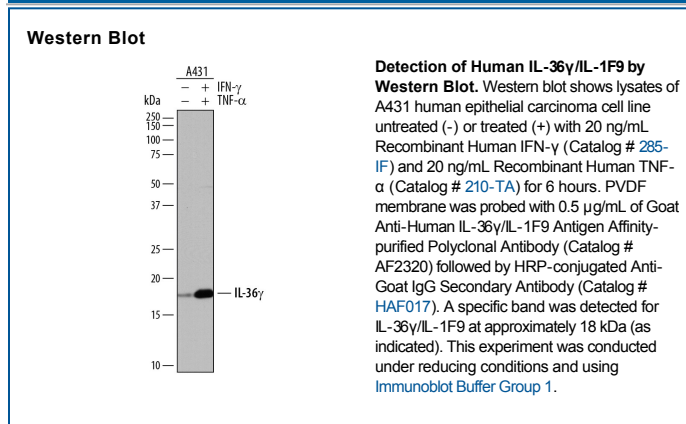
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-36 $\gamma$ /IL-1F9 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human (rh) IL-36 $\alpha$ is observed, approximately 5% cross-reactivity with rhIL-37 is observed, and less than 1% cross-reactivity with rhIL-1 $\alpha$ , rhIL-1 $\beta$ , rhIL-36Ra, and rhIL-36 $\beta$ is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human IL-36 $\gamma$ /IL-1F9 (R&D Systems, Catalog # 2320-IL) Met1-Asp169 Accession # Q9NZH8
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the antibody by the LAL method.
<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 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.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.5 $\mu$ g/mL	See Below
<b>Blockade of Receptor-ligand Interaction</b>	In a functional ELISA, 0.7-2.8 $\mu$ g/mL of this antibody will block 50% of the binding of 5 $\mu$ g/mL of Recombinant Human IL-1 Rrp2/IL-1 R6 Fc Chimera (Catalog # 872-RP) to immobilized Recombinant Human IL-36 $\gamma$ /IL-1F9 (Catalog # 2320-IL) coated at 1 $\mu$ g/mL (100 $\mu$ L/well). At 10 $\mu$ g/mL, this antibody will block >90% of the binding.	

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 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 interleukin 1 family member #9 [IL-1F9; also named Interleukin-36 gamma, IL36G, IL-1 $\epsilon$  (epsilon) and IL-1H1] is a member of the IL-1 family, which includes IL-1 $\beta$ , IL-1 $\alpha$ , IL-1ra, IL-18 and IL-1F5 through F10 (1-4). All family members show a 12  $\beta$ -strand,  $\beta$ -trefoil configuration, and are believed to have arisen from a common ancestral gene that has undergone multiple duplications (4). IL-1F9 is synthesized as a 19 kDa, 169 amino acid (aa) protein that contains no signal sequence, no prosegment and no potential N-linked glycosylation site (1, 2, 5). The molecule is secreted when transfected into 293-T cells (5). Human to mouse, IL-1F9 has 53% aa sequence identity. Within the family, IL-1F9 shares 30%, 23%, 33%, 57%, 35%, 45%, and 32% aa sequence identity with IL-1 ra, IL-1 $\beta$ , IL-1F5, F6, F7, F8, and F10, respectively. Cells reported to express IL-1F9 include Langerhans cells, keratinocytes/stratified squamous epithelium, plus Chief cells and Parietal cells of the stomach (4, 5). The receptor for IL-1F9 is reported to be a combination of IL-1 Rrp2 and IL-1 RAcP (6). Recombinant IL-1F9, along with IL-1F8 and IL-1F6, has been shown to activate the pathway involving NF- $\kappa$ B and MAPK in an IL-1 Rrp2 dependent manner.

## References:

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4. Dunn, E. *et al.* (2001) Trends Immunol. **22**:533.
5. Debets, R. *et al.* (2001) J. Immunol. **167**:1440.
6. Towne, J.E. *et al.* (2004) J. Biol. Chem. **279**:13677.