

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-36γ/IL-1F9 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) IL-1α, rhIL-1β, rhIL-36Ra/IL-1F5, rhIL-36α/IL-1F6, rhIL-1F7, rhIL-36β/IL-1F8, rhIL-1ra/IL-1F3, or rhIL-18/IL-1F4 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 278706
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human IL-36γ/IL-1F9 Met1-Asp169 Accession # Q9NZH8
Endotoxin Level	<0.10 EU per 1 μg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μm 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 μm 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
Western Blot	1 μg/mL	Recombinant Human IL-36γ/IL-1F9 (Catalog # 2320-IL)
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.15-0.6 μg/mL of this antibody will block 50% of the binding of 5 μg/mL of Recombinant Human IL-1 Rrp2/IL-1 R6 Fc Chimera to immobilized Recombinant Human IL-36γ/IL-1F9 coated at 1 μg/mL (100 μL/well). At 10 μg/mL, this antibody will block >90% of the binding.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin-36 gamma (IL-36γ) [also named IL-1F9, IL-1ε (epsilon), and IL-1H1] is a member of the IL-1 family, which includes IL-1β, IL-1α, IL-1ra, IL-18 and IL-1F5 through F10 (1-4). All family members show a 12 β-strand, β-trefoil configuration, and are believed to have arisen from a common ancestral gene that has undergone multiple duplications (4). IL-36γ 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 293T cells (5). Human to mouse, IL-36γ has 53% aa sequence identity. Within the family, IL-36γ shares 30%, 23%, 33%, 57%, 35%, 45%, and 32% aa sequence identity with IL-1 ra, IL-1β, IL-1F5, F6, F7, F8, and F10, respectively. Cells reported to express IL-36γ include Langerhans cells, keratinocytes/stratified squamous epithelium, plus chief cells and parietal cells of the stomach (4, 5). The receptor for IL-36γ is reported to be a combination of IL-1 Rrp2 and IL-1 RAcP (6). Recombinant IL-36γ, along with IL-36β/IL-1F8 and IL-36α/IL-1F6, has been shown to activate the pathway involving NF-κB 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.