

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-36α/IL-1F6 in direct ELISAs and Western blots. In Western blots, less than 2% cross-reactivity with recombinant human (rh) rhFIL-1η, rhIL-1α, rhIL-1β and rhIL-18 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human IL-36α/IL-1F6 Met1-Phe158 Accession # Q9UHA7
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.

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	0.1 µg/mL	Recombinant Human IL-36α/IL-1F6 (Catalog # 1078-IL)
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human tonsil

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

Human interleukin 1 family member #6 [IL-1F6; also Interleukin-36 alpha, IL36A, FIL-1ε (epsilon)] is a member of the IL-1 family of proteins (1-3). IL-1 family members include IL-1β, IL-1α, IL-1ra, IL-18 and IL-1F5 through F10 (4). All family members show a 12 β-strand, β-trefoil configuration, and all family members are believed to have arisen from a common ancestral gene that has undergone multiple duplications (4). IL-1F6 is synthesized as a 158 amino acid (aa) protein that contains no signal sequence, no prosegment and no potential N-linked glycosylation site(s) (1-3). It appears to be actively secreted (1). When found in cell lysate, it presents as an 18 kDa monomer (2). Human to mouse, full length IL-1F6 has 54% aa identity. Within the family, IL-1F6 is 30% aa identical to IL-1ra, and 27%, 31%, 36%, 46%, 57% and 28% aa identical to IL-1β, IL-1F5, F7, F8, F9 and F10, respectively. Cells reported to express IL-1F6 include monocytes, B cells and T cells (1, 4). Notably, IL-1F6 is the only novel IL-1 family member found to be expressed on T-cells. The receptor for IL-1F6 is reported to be a combination of IL-1 Rrp2 and IL-1 RAcP (5). Recombinant IL-1F6, along with IL-1F8 and IL-1F9, has been shown to act as an agonist by activating the pathway involving NF-κB and MAPK in an IL-1 Rrp2 dependent manner. This suggests that IL-1F6 may signal in a similar fashion to IL-1 and IL-18 in having a binding receptor which upon ligation, recruits a second receptor as a signaling component, forming an active heterodimeric receptor complex.

References:

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3. Nicklin, M.J.H. *et al.* (2002) *Genomics.* **79**:718.
4. Dunn, E. *et al.* (2001) *Trends Immunol.* **22**:533.
5. Towne, J.E. *et al.* (2004) *J. Biol. Chem.* **279**:13677.