Human IL-36α/IL-1F6 Antibody

Monoclonal Mouse IgG_{2B} Clone # 162122

Catalog Number: MAB1078

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-36α/IL-1F6 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-1α, rhIL-1β, rhIL-1 receptor antagonist, rhIL-18, rhIL-36Ra, rhIL-36β or recombinant mouse IL-36α is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 162122
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human IL-36α/IL-1F6 Met1-Phe158 Accession # Q9UHA7
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.

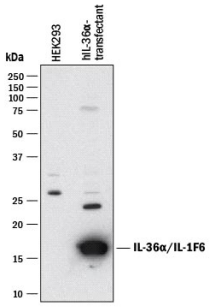
APPLICATIONS

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	See Below

DATA

Western Blot



Detection of Human IL-36α/IL-1F6 by Western Blot. Western blot shows lysates of HEK293 human embryonic kidney cell line either mock transfected or transfected with human IL-36α/IL-1F6. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human IL-36α/IL-1F6 Monoclonal Antibody (Catalog # MAB1078) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for IL-36α/IL-1F6 at approximately 16 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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.** ● 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 IL-36α and FIL-1ε (epsilon)] is a member of the IL-1 family of proteins (1-3, 6). 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-36α 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-36α has 54% aa identity. Within the family, IL-36α is 30% aa identical to IL-1ra, and 27%, 31%, 36%, 46%, 57% and 28% aa identical to IL-1β, IL-36Ra, IL-1F7, IL-36β, IL-36γ, and IL-1F10, respectively. Cells reported to express IL-36α include monocytes, B cells and T cells (1, 4). Notably, IL-36α is the only novel IL-1 family member found to be expressed on T-cells. The receptor for IL-36α is reported to be a combination of IL-1 Rrp2 and IL-1 RAcP (5). Recombinant IL-36α, along with IL-36β and IL-36γ, 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-36α 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:

1. Smith, D.E. *et al.* (2000) J. Biol. Chem. **275**:1169.
2. Kumar, S. *et al.* (2000) J. Biol. Chem. **275**:10308.
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.
6. Dinarello, C. et al. (2010) Nat. Immunol. 11:973.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449