10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IL-36B Antibody

Catalog # ASC11711

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9NZH7
Other Accession	NP_055253, 20070252
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	18522
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	IL-36B antibody can be used for detection of IL-36B by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	27177
Other Names	Interleukin-36 beta, FIL1 eta, Interleukin-1 eta, IL-1 eta, Interleukin-1 family member 8, IL-1F8, Interleukin-1 homolog 2, IL-1H2, IL36B, IL1F8, IL1H2
Target/Specificity	IL36B; IL-36B antibody is human specific. At least two isoforms of IL-36B are known to exist; this antibody will only detect the longer isoform. IL-36B antibody will not cross-react with IL-36A or IL-36G.
Reconstitution & Storage	IL-36B antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	IL-36B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IL36B (HGNC:15564)
Synonyms	IL1F8, IL1H2
Function	Cytokine that binds to and signals through the IL1RL2/IL-36R receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells linked to a pro-inflammatory response. Part of the IL- 36 signaling system that is thought to be present in epithelial barriers and to take part in local inflammatory response; similar to the IL-1 system with which it shares the coreceptor IL1RAP. Stimulates production of interleukin-6 and interleukin-8 in synovial fibrobasts, articular chondrocytes and mature adipocytes. Induces expression of a number of antimicrobial peptides including beta-defensins 4

	and 103 as well as a number of matrix metalloproteases. Seems to be involved in skin inflammatory response by acting on keratinocytes, dendritic cells and indirectly on T-cells to drive tissue infiltration, cell maturation and cell proliferation. In cultured keratinocytes induces the expression of macrophage, T-cell, and neutrophil chemokines, such as CCL3, CCL4, CCL5, CCL2, CCL17, CCL22, CL20, CCL5, CCL2, CCL17, CCL22, CXCL8, CCL20 and CXCL1, and the production of pro-inflammatory cytokines such as TNF-alpha, IL-8 and IL-6.
Cellular Location	Cytoplasm. Secreted. Note=The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum-Golgi intermediate compartment) followed by vesicle entry and secretion.
Tissue Location	Expression at low levels in tonsil, bone marrow, heart, placenta, lung, testis and colon but not in any hematopoietic cell lines. Not detected in adipose tissue. Expressed at higher levels in psoriatic plaques than in symptomless psoriatic skin or healthy control skin. Increased levels are not detected in inflamed joint tissue.

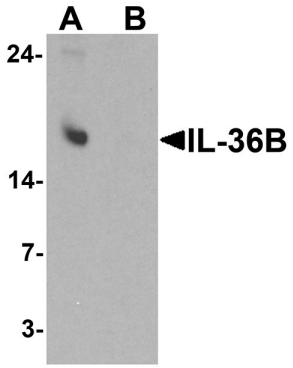
Background

IL-36B is is a member of the interleukin 1 cytokine family whose gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2 (1). IL-36B is thought to activate the NF-kappaB pathway through IL-1 receptor family members IL-1RL2 and IL-1RAcP (2). Like the related proteins IL-36A and IL-36G, IL-36B requires post-translational processing for full agonist activity, but the cleavage mechanism is currently unknown (3). The IL-36 cytokines have been suggested to amplify Th1 responses by enhancing proliferation and Th1 polarization of naive CD4+ T cells (4).

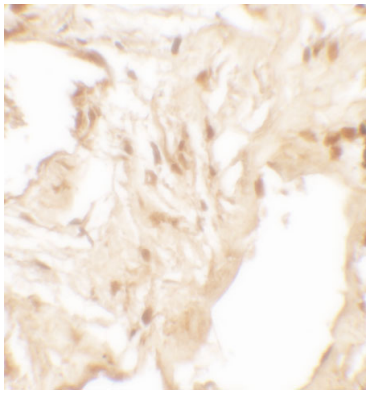
References

Smith DE, Renshaw BR, Ketchem RR, et al. Four new members expand the interleukin-1 superfamily. J. Biol. Chem. 2000; 275:1169-75.
Towne JE, Garka KE, Renshaw BR, et al. Interleukin (IL)-1F6, IL-1F8, and IL-1F9 signal through IL-1Rrp2 and IL-1RAcP to activate the pathway leading to NF-kappaB and MAPKs. J. Biol. Chem. 2004; 279:13677-88.
Towne JE, Renshaw BR, Douangpanya J, et al. Interleukin-36 (IL-36) ligands require processing for full agonist agonist (IL-36a, IL-36b, and IL-36g) or antagonist (IL-36Ra) activity. J. Biol. Chem. 2011; 286:42594-602.
Vigne S, Palmer G, Martin P, et al. IL-36 signaling amplifies Th1 responses by enhancing proliferation and Th1 polarization of naive CD4+ T cells. Blood 2012; 120:3478-87.

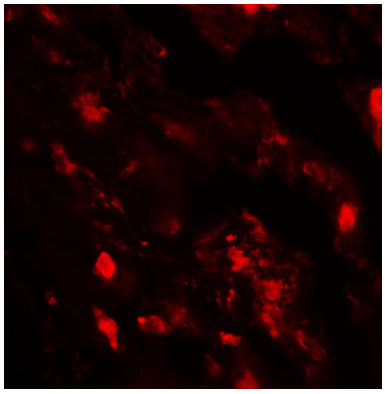
Images



Western blot analysis of IL-36B in A549 cell lysate with IL-36B antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of IL-36B in human lung tissue with IL-36B antibody at 2.5 µg/mL.



Immunofluorescence of IL-36B in human lung tissue with IL-36B antibody at 20 µg/mL.