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IL-36A Antibody

Catalog # ASC11710

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9UHA7
Other Accession	NP_055255, 7657092
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	17684
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	IL-36A antibody can be used for detection of IL-36A by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	27179
Other Names	Interleukin-36 alpha, FIL1 epsilon, Interleukin-1 epsilon, IL-1 epsilon, Interleukin-1 family member 6, IL-1F6, IL36A, FIL1E, IL1E, IL1F6
Target/Specificity	IL36A; IL-36A antibody is human specific. IL-36A antibody will not cross-react with IL-36B or IL-36G.
Reconstitution & Storage	IL-36A antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	IL-36A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IL36A (HGNC:15562)
Synonyms	FIL1E, IL1E, IL1F6
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. 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. In cultured monocytes up-regulates expression of IL-1A, IL-1B and IL-6. In myeloid dendritic cells involved in cell maturation by up-regulating surface expression of CD83, CD86 and HLA-DR. In monocyte-derived dendritic cells facilitates dendritic cell maturation and drives T-cell proliferation. May play a role in pro-inflammatory effects in the lung.
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	Expressed in immune system and fetal brain, but not in other tissues tested or in multiple hematopoietic cell lines Predominantly expressed in skin keratinocytes but not in fibroblasts, endothelial cells or melanocytes. Increased in lesional psoriasis skin

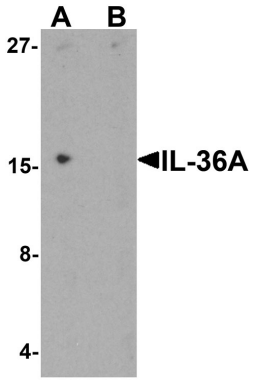
Background

IL-36A 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-36A 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-36B and IL-36G, IL-36A 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

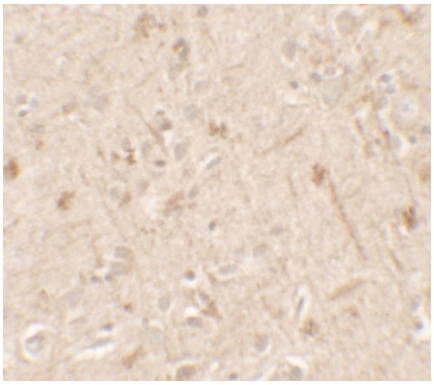
Smith DE, Renshaw BR, Ketchem RR, et al. Four new members expand the interleukin-1 superfamily. J. Biol. Chem. 2000; 275:1169-75.
Towne JE, Garka KE, Renshaw BR, et al. Interleukin (IL)-1F6, IL-1F8, and IL-1F9 signal through IL-1Rrp2 and IL-1RAcP to activate the pathway leading to NF-kappaB and MAPKs. 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

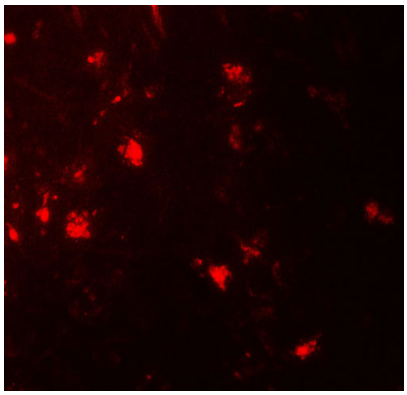


Western blot analysis of IL-36A in MCF7 cell lysate with IL-36A antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.

Immunohistochemistry of IL-36A in human brain tissue



with IL-36A antibody at 5 µg/mL.



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