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

PNPLA2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20306a

Product Information

Application	WB, E
Primary Accession	Q96AD5
Reactivity	Human
Predicted	Mouse, Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40409
Calculated MW	55316
Antigen Region	49-78

Additional Information

Gene ID	57104
Other Names	Patatin-like phospholipase domain-containing protein 2, Adipose triglyceride lipase, Calcium-independent phospholipase A2, Desnutrin, IPLA2-zeta, Pigment epithelium-derived factor, TTS22, Transport-secretion protein 2, TTS2, PNPLA2, ATGL
Target/Specificity	This PNPLA2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 49-78 amino acids from the N-terminal region of human PNPLA2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PNPLA2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

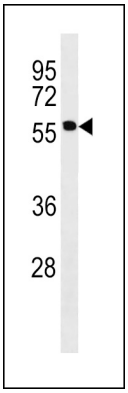
Name	PNPLA2 (HGNC:30802)
Function	Catalyzes the initial step in triglyceride hydrolysis in adipocyte and

	non-adipocyte lipid droplets (PubMed:15364929, PubMed:15550674, PubMed:16150821, PubMed:16239926, PubMed:17603008, PubMed:34903883). Exhibits a strong preference for the hydrolysis of long-chain fatty acid esters at the sn-2 position of the glycerol backbone and acts coordinately with LIPE/HLS and DGAT2 within the lipolytic cascade (By similarity). Also possesses acylglycerol transacylase and phospholipase A2 activities (PubMed:15364929, PubMed:17032652, PubMed:17603008). Transfers fatty acid from triglyceride to retinol, hydrolyzes retinylesters, and generates 1,3- diacylglycerol from triglycerides (PubMed:17603008). Regulates adiposome size and may be involved in the degradation of adiposomes (PubMed:16239926). Catalyzes the formation of an ester bond between hydroxy fatty acids and fatty acids derived from triglycerides or diglycerides to generate fatty acid esters of hydroxy fatty acids (FAHFAs) in adipocytes (PubMed:35676490). Acts antagonistically with LDAH in regulation of cellular lipid stores (PubMed:28578400). Inhibits LDAH-stimulated lipid droplet fusion (PubMed:28578400). May play an important role in energy homeostasis (By similarity). May play a role in the response of the organism to starvation, enhancing hydrolysis of triglycerides and providing free fatty acids to other tissues to be oxidized in situations of energy depletion (By similarity).
Cellular Location	Lipid droplet. Cell membrane; Multi-pass membrane protein. Cytoplasm {ECO:0000250|UniProtKB:Q8BJ56}
Tissue Location	Highest expression in adipose tissue. Also detected in heart, skeletal muscle, and portions of the gastrointestinal tract Detected in normal retina and retinoblastoma cells. Detected in retinal pigment epithelium and, at lower intensity, in the inner segments of photoreceptors and in the ganglion cell layer of the neural retina (at protein level).

Background

Catalyzes the initial step in triglyceride hydrolysis in adipocyte and non-adipocyte lipid droplets. Also has acylglycerol transacylase activity. May act coordinately with LIPE/HLS within the lipolytic cascade. Regulates adiposome size and may be involved in the degradation of adiposomes. May play an important role in energy homeostasis. May play a role in the response of the organism to starvation, enhancing hydrolysis of triglycerides and providing free fatty acids to other tissues to be oxidized in situations of energy depletion.

Images



PNPLA2 Antibody (N-term) (Cat. #AP20306a) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the PNPLA2 antibody detected the PNPLA2 protein (arrow).

Citations

- β-Caryophyllene attenuates palmitate-induced lipid accumulation through AMPK signaling by activating CB2 receptor in human HepG2 hepatocytes.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.