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ATGL / PNPLA2 Antibody

Rabbit mAb
Catalog # AP92342

Product Information

Application	WB
Primary Accession	Q96AD5
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	ATGL; Desnutrin; plpl; plpl2; Pnpla2; TTS 2.2; TTS2; TTS2.2; ZETA;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	55316

Additional Information

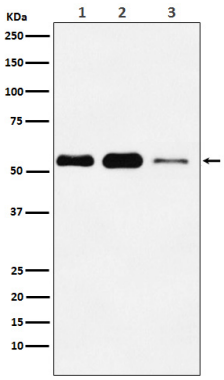
Dilution	WB 1:500~1:2000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human ATGL / PNPLA2
Description	Catalyzes the initial step in triglyceride hydrolysis in adipocyte and non-adipocyte lipid droplets. Also has acylglycerol transacylase activity. May act coordinately with LIPE/HLS within the lipolytic cascade. Regulates adiposome size and may be involved in the degradation of adiposomes.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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).

Images



Western blot analysis of ATGL / PNPLA2 expression in (1) A431 cell lysate; (2) NIH/3T3 cell lysate; (3) C6 cell lysate.

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