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

Anti-ATGL / PNPLA2 Rabbit Monoclonal Antibody

Catalog # ABO15762

Product Information

Application	WB
Primary Accession	Q96AD5
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-ATGL / PNPLA2 Rabbit Monoclonal Antibody . Tested in WB application. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	57104
Other Names	Patatin-like phospholipase domain-containing protein 2, 3.1.1.3, Adipose triglyceride lipase, Calcium-independent phospholipase A2-zeta, iPLA2-zeta, 3.1.1.4, Desnutrin, Pigment epithelium-derived factor receptor, PEDF-R, TTS2.2, Transport-secretion protein 2, TTS2, PNPLA2 (HGNC:30802)
Calculated MW	55316
Application Details	WB 1:500-1:2000
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 23P38
Immunogen	A synthesized peptide derived from human ATGL / PNPLA2
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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

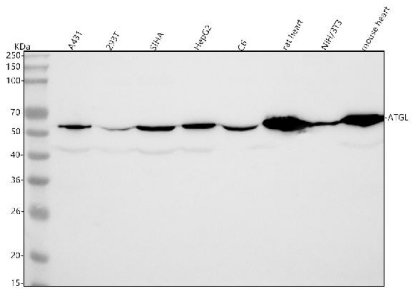

Figure 1. Western blot analysis of ATGL/PNPLA2 using anti-ATGL/PNPLA2 antibody (M01800).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human A431 whole cell lysates,
Lane 2: human 293T whole cell lysates,
Lane 3: human SiHa whole cell lysates,
Lane 4: human HepG2 whole cell lysates,
Lane 5: rat C6 whole cell lysates,
Lane 6: rat heart tissue lysates,
Lane 7: mouse NIH/3T3 whole cell lysates,
Lane 8: mouse heart tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ATGL/PNPLA2 antigen affinity purified monoclonal antibody (Catalog # M01800) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:1000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ATGL/PNPLA2 at approximately 55 kDa. The expected band size for ATGL/PNPLA2 is at 55 kDa.

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