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Goat Anti-PNPLA2 / ATGL Antibody
Peptide-affinity purified goat antibody
Catalog # AF1844a

Specification

Goat Anti-PNPLA2 / ATGL Antibody - Product Information

Application	**WB**
Primary Accession	Q96AD5
Other Accession	NP_065109, 57104
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**55316**

Goat Anti-PNPLA2 / ATGL Antibody - 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, Desnutrin, IPLA2-zeta, Pigment epithelium-derived factor, TTS2.2, Transport-secretion protein 2, TTS2, PNPLA2, ATGL

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-PNPLA2 / ATGL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PNPLA2 / ATGL Antibody - Protein Information

Name PNPLA2 (HGNC:30802)

Function
Catalyzes the initial step in triglyceride hydrolysis in adipocyte and non-adipocyte lipid droplets (PubMed:15550674, PubMed:15364929, PubMed:16150821, PubMed:17603008,

PubMed:16239926, 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). 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). 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).

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).

Goat Anti-PNPLA2 / ATGL Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-PNPLA2 / ATGL Antibody - Images

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AF1844a (0.2 µg/ml) staining of Human Adipose lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-PNPLA2 / ATGL Antibody - Background

This gene encodes an enzyme which catalyzes the first step in the hydrolysis of triglycerides in adipose tissue. Mutations in this gene are associated with neutral lipid storage disease with myopathy.

Goat Anti-PNPLA2 / ATGL Antibody - References

High frequency of ETFDH c.250G>A mutation in Taiwanese patients with late-onset lipid storage myopathy. Lan MY, et al. Clin Genet, 2010 Mar 29. PMID 20370797.
Rare ATGL haplotypes are associated with increased plasma triglyceride concentrations in the Greenland Inuit. Johansen CT, et al. Int J Circumpolar Health, 2010 Feb. PMID 20167152.
Chronic TNFalpha and cAMP pre-treatment of human adipocytes alter HSL, ATGL and perilipin to regulate basal and stimulated lipolysis. B□zaire V, et al. FEBS Lett, 2009 Sep 17. PMID 19695247.
Characterization of desnutrin functional domains: critical residues for triacylglycerol hydrolysis in cultured cells. Duncan RE, et al. J Lipid Res, 2010 Feb. PMID 19692632.
Contribution of adipose triglyceride lipase and hormone-sensitive lipase to lipolysis in hMADS adipocytes. Bezaire V, et al. J Biol Chem, 2009 Jul 3. PMID 19433586.