

ATGLAntibody
Rabbit Polyclonal Antibody
Catalog # ABV10628**Specification**

ATGLAntibody - Product Information

Application	WB, IHC, IP
Primary Accession	O96AD5
Other Accession	AAW81962
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	55316

ATGLAntibody - Additional Information**Gene ID** 57104

Positive Control

Application & Usage

Western Blot: rat kidney tissue lysate. **IHC:** Heart tissue
Western blotting (0.5-4 µg/ml), **Immunohistochemistry** (5 µg/ml), and **immunoprecipitation**. recognizes 54 kDa ATGL in samples from human, mouse and rat origins. However, the optimal concentrations should be determined individually.

Other Names

Adipose Triglyceride Lipase, Patatin-like phospholipase domain-containing protein 2, Desnutrin, Transport-secretion protein 2, TTS2

Target/Specificity

ATGL

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

ATGLAntibody is for research use only and not for use in diagnostic or therapeutic procedures.

ATGLAntibody - 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).

ATGLAntibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ATGLAntibody - Images

ATGLAntibody - Background

Triglycerides form an important energy store in many living organisms. Adipose tissue serves as the primary storage depot for triglycerides in mammals. Lipolytic enzymes mobilize triglycerides during periods of starvation to provide organisms with necessary energy. Hormone-sensitive lipase (HSL), the first identified lipolytic enzyme, hydrolyzes triglycerides in mammalian adipose tissues. Additional lipolytic enzymes, including adipose triglyceride lipase (ATGL), have also been discovered. The primary function of ATGL is to catalyze the hydrolysis of the first ester bond of lipid molecules. This enzyme may provide diglyceride substrates for HSL hydrolysis. ATGL is abundantly expressed in murine white and brown adipose tissue, and is highly substrate specific. ATGL was independently identified as desnutrin and the TG-hydrolase inducible phospholipase-A2-z.