Revision 6

Store at -20C

#2138

ATGL Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M	Endogenous	54	Rabbit	#Q96AD5	57104

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

ATGL Antibody detects endogenous levels of total ATGL protein.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a sequence around Pro186 of human ATGL. Antibodies are purified by protein A and peptide affinity chromatography.

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 (1-3). 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 (4). ATGL was independently identified as desnutrin (5) and the TG-hydrolace inducible phospholipase-A2-ζ (6).

Background References

1. Holm, C. et al. (1988) *Science* 241, 1503-1506.
2. Degerman, E. et al. (1990) *Proc. Natl. Acad. Sci. USA* 87, 533-537.
3. Anthonsen, M.W. et al. (1998) *J. Biol. Chem.* 273, 215-221.
4. Zimmermann, R. et al. (2004) *Science* 306, 1383-1386.
5. Villena, J.A. et al. (2004) *J. Biol. Chem.* 279, 47066-47075.
6. Jenkins, C.M. et al. (2004) *J. Biol. Chem.* 279, 48968-48975.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse

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Limited Uses

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