

#2138 Store at -20°C

ATGL Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IHC-P, IF-IC Endogenous	M, (R)	54 kDa	Rabbit**

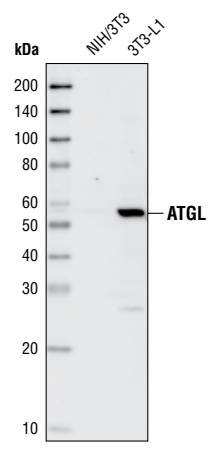
Background: Triglycerides form an important energy store in many living organisms. Adipose tissue serves as the primary storage depot for triglycerides in mammals. Lipolytic enzymes mobilize triglycerides during periods of starvation to provide organisms with necessary energy. Hormone-sensitive lipase (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-hydrolyase inducible phospholipase-A2-ζ (6).

Specificity/Sensitivity: ATGL Antibody detects endogenous levels of total ATGL protein.

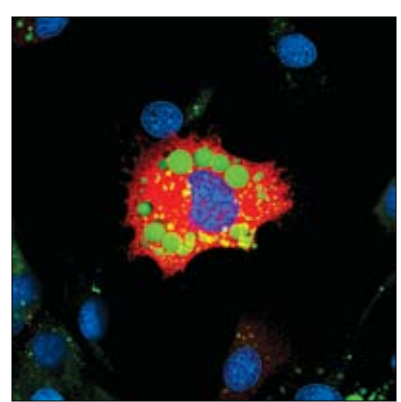
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to a sequence around Pro186 of human ATGL. Antibodies are purified by protein A and peptide affinity chromatography.

Background 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.



Western blot analysis of extracts from NIH/3T3 and differentiated 3T3-L1 cells, using ATGL antibody.



Confocal immunofluorescent analysis of 3T3-L1 cells using ATGL Antibody (red) showing cytoplasmic localization in differentiated cells. Lipid droplets have been labeled with BODIPY 493/503 (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID #57104
Swiss-Prot Acc. #Q5EFF5

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:800
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5%NGS
Immunofluorescence (IF-IC)	1:400

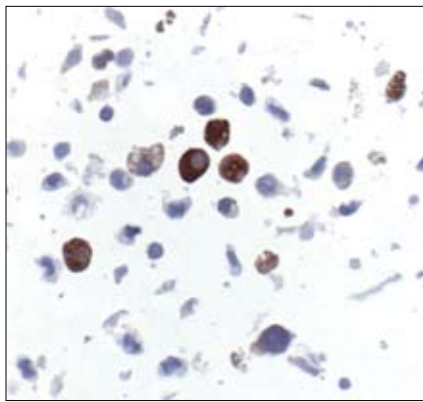
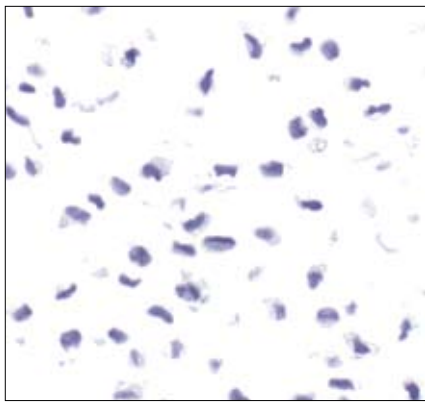
For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

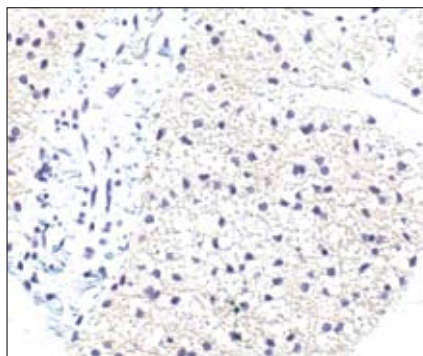
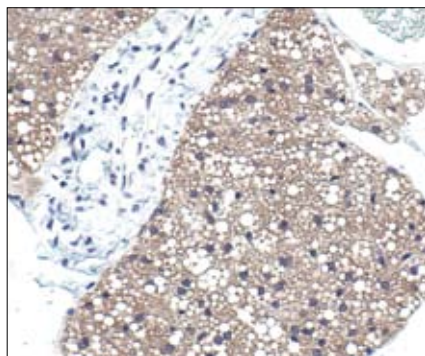
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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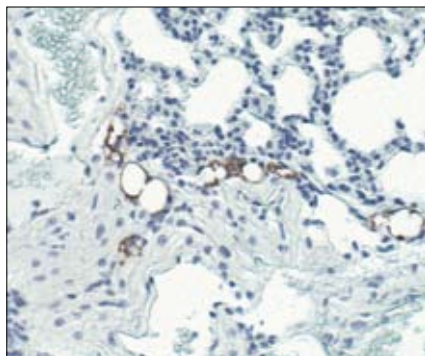
Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunohistochemical analysis of paraffin-embedded 3T3-L1 cells undifferentiated (left) or differentiated (right) showing induced staining in adipocytes using ATGL Antibody.



Immunohistochemical analysis of paraffin-embedded mouse brown fat using ATGL Antibody in the presence of control peptide (left) or antigen-specific peptide (right).



Immunohistochemical analysis of paraffin-embedded mouse lung, showing specific staining of fat using ATGL Antibody.