

#2138 Store at -20°C

# ATGL Antibody

✓ 100 µl  
(10 Western mini-blot)



**Orders** ■ 877-616-CELL (2355)  
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This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

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

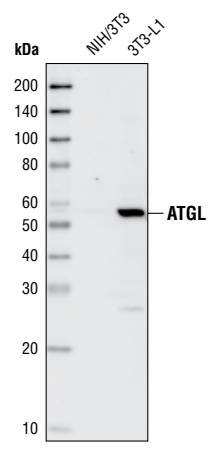
**Background:** Triglycerides are an important energy store in many living organisms. In mammals, adipose tissue serves as the primary storage depot for triglycerides. During periods of starvation, these lipid molecules are mobilized to provide organisms with necessary energy needs. Hormone-sensitive lipase (HSL) was the first lipolytic enzyme identified to hydrolyze triglycerides in mammalian adipose tissues (1,2,3). In addition to HSL, another lipolytic enzyme, adipose triglyceride lipase (ATGL), has been discovered. The primary function of ATGL is to catalyze the hydrolysis of the first ester bond of these lipid molecules (4). This enzyme is also thought to provide diglyceride substrates for HSL (4). ATGL was also independently identified as desnutrin (5) and the TG-hydrolase inducible phospholipase-A2-ζ (6). ATGL is abundantly expressed in murine white and brown adipose tissues, and is highly specific for its substrates (4).

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

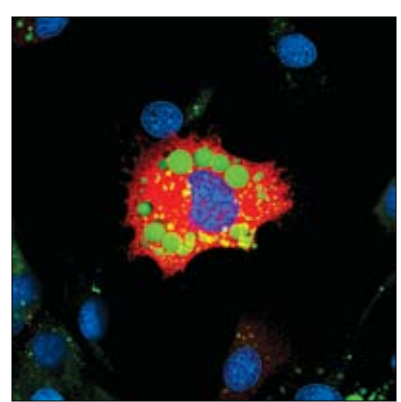
**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) derived from a sequence around Pro186 of human ATGL. Antibodies are purified by protein A and peptide affinity chromatography.

### Background References:

- (1) Holm, C. et al. (1988) *Science* 241, 1503–6.
- (2) Degerman, E. et al. (1990) *Proc. Natl. Acad. Sci. USA* 87, 533–7.
- (3) Anthonsen, M.W. et al. (1998) *J. Biol. Chem.* 273, 215–21.
- (4) Zimmermann, R. et al. (2004) *Science* 306, 1383–6.
- (5) Villena, J.A. et al. (2004) *J. Biol. Chem.* 279, 47066–75.
- (6) Jenkins, C.M. et al. (2004) *J. Biol. Chem.* 279, 48968–75.



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® (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
IHC protocol: Unmasking buffer/Antibody diluent Citrate/TBST-5%NGS	
Immunofluorescence (IF-IC)	1:400

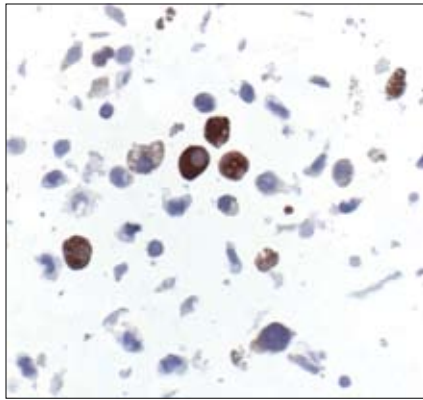
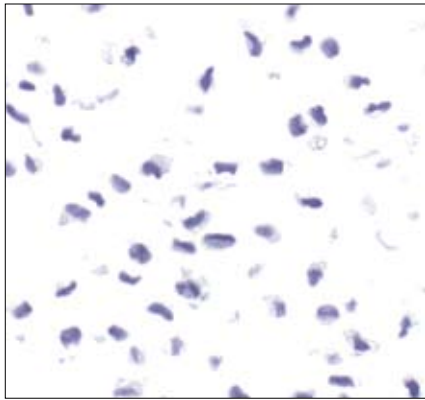
For application specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).

Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended companion products.

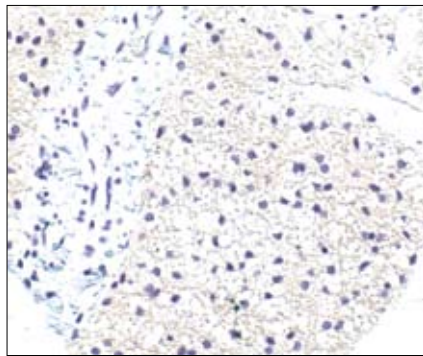
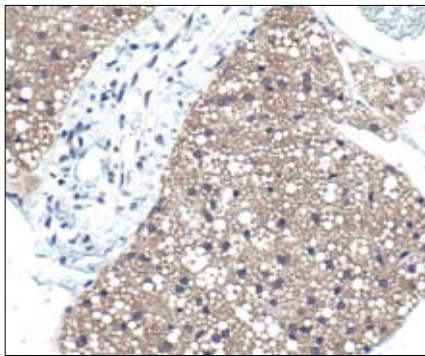
**IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

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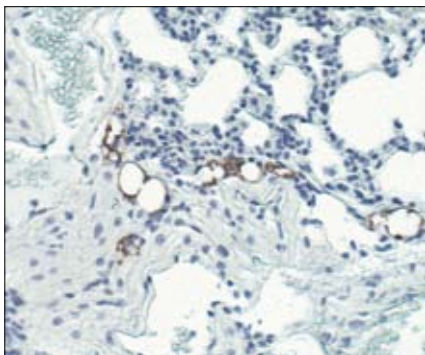
**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae 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.*