Revision 1

#2439 Store at -20C

ATGL (30A4) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, IF-IC	M	Endogenous	54	Rabbit IgG	#Q96AD5	57104

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:50
Immunofluorescence (Immunocytochemistry)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

ATGL (30A4) Rabbit mAb detects endogenous levels of total ATGL protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro469 of mouse ATGL.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)
IF-IC: Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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