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# ATGL Polyclonal Antibody

**Catalog Number** **PA5-18672**

**Product data sheet**

| Details | |
|---|---|
| **Size** | 100 µg |
| **Host/Isotope** | Goat / IgG |
| **Class** | Polyclonal |
| **Type** | Antibody |
| **Immunogen** | Synthetic peptide sequence (NIIEVSKEARKR) corresponding to the internal amino acids of PNPLA2 |
| **Conjugate** | Unconjugated |
| **Form** | Liquid |
| **Concentration** | 0.5 mg/mL |
| **Purification** | Ammonium sulfate precipitation |
| **Storage buffer** | TBS, pH 7.3, with 0.5% BSA |
| **Contains** | 0.02% sodium azide |
| **Storage Conditions** | -20° C, Avoid Freeze/Thaw Cycles |

| Species Reactivity | |
|---|---|
| **Species reactivity** | Human |

| Tested Applications | Dilution * |
|---|---|
| **Immunohistochemistry (Paraffin) (IHC (P))** | 2-3 µg/mL |
| **Western Blot (WB)** | 0.5-2 µg/mL |

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

## Product specific information

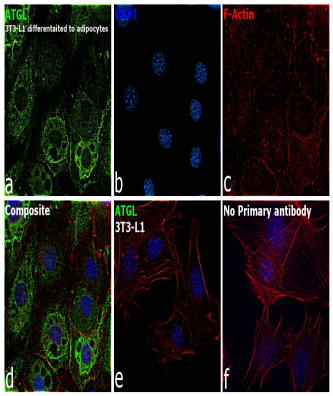
This antibody is predicted to react with bovine, canine, mouse, porcine and rat based on sequence homology. This antibody is tested in Peptide ELISA: antibody detection limit dilution 32,000.

## Background/Target Information

Lipolytic enzymes are required for mobilization of fatty acids from triglyceride stores in adipose tissue. Energy homeostasis is affected by dysfunctional lipolysis and may contribute to the pathogenesis of obesity and insulin resistance. Until recently, hormone-sensitive lipase (HSL) was the only enzyme known to hydrolyze triglycerides in mammalian adipose tissue. It is now thought that a second enzyme, adipose triglyceride lipase (ATGL), catalyzes the initial step in triglyceride hydrolysis. ATGL is highly expressed in adipose tissue of mice and humans. It exhibits high substrate specificity for triacylglycerol and is associated with lipid droplets. Inhibition of ATGL markedly decreases total adipose acyl-hydrolase activity. Thus, ATGL and HSL coordinately catabolize stored triglycerides in adipose tissue of mammals.

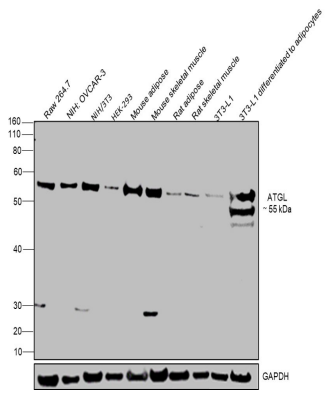
*For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.*

## Product Images For ATGL Polyclonal Antibody



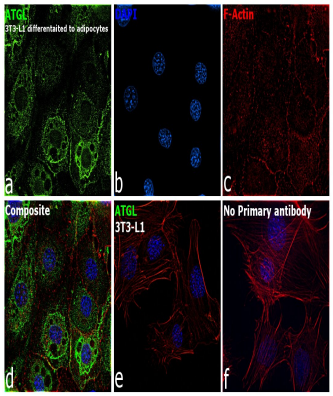

### ATGL Antibody (PA5-18672)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Immunofluorescence analysis using ATGL Polyclonal Antibody (Product # PA5-18672) shows increased expression of ATGL in 3T3-L1 differentiated adipocytes in comparison to 3T3-L1. {RE}



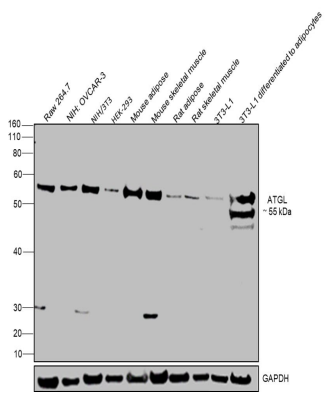

### ATGL Antibody (PA5-18672) in WB

Western blot was performed using ATGL Polyclonal Antibody (Product # PA5-18672) and a 55 kDa band corresponding to ATGL was observed across cell lines and tissues tested. Whole cell extracts (30 µg lysate) of Raw 264.7 (Lane 1), NIH: OVCAR-3 (Lane 2), NIH/3T3 (Lane 3), HEK-293 (Lane 4), Mouse adipose (Lane 5), Mouse skeletal muscle (Lane 6), Rat adipose (Lane 7), Rat skeletal muscle (Lane 8), 3T3-L1 (Lane 9), 3T3-L1 differentiated to adipocytes (Lane 10) were electrophoresed using NuPAGE® 4-12 % Bis-Tris gel (Product # NP0321BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (0.5 µg/mL) and detected by chemiluminescence with Rabbit anti-Goat IgG Heavy Chain Superclonal™ Recombinant Secondary Antibody, HRP (Product # A27014, 1:4,000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).




### ATGL Antibody (PA5-18672) in ICC/IF

Immunofluorescence analysis of ATGL was performed using 70% confluent log phase 3T3-L1 and 3T3-L1 differentiated to adipocytes. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with ATGL Polyclonal Antibody (Product # PA5-18672) at 5 µg/mL in 0.1% BSA, incubated at 4 degree Celsius overnight and then labeled with Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Recombinant Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A27034) at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing localization to vacuolar structure (fat droplets) in cytoplasm. Panel e shows 3T3-L1 cells with no expression of ATGL. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.




### ATGL Antibody (PA5-18672)

Antibody specificity was demonstrated by detection of differential basal expression of the target across tissues owing to their inherent genetic constitution. Higher expression of ATGL was observed in 3T3-L1 differentiated adipocytes in comparison to 3T3-L1 using ATGL Polyclonal Antibody (Product # PA5-18672) in western blot. {RE}



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**ATGL Antibody (PA5-18672) in WB**

Western blot analysis of ATGL using ATGL Polyclonal Antibody (Product # PA5-18672) (0.5 µg/mL) in staining of Human Adipose lysate (35 µg protein in RIPA buffer). Detected by chemiluminescence.



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