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# APG7L Antibody(D555)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11191a

## Product Information

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| **Application** | WB, IHC-P, FC, E |
| **Primary Accession** | O95352 |
| **Other Accession** | Q641Y5, Q9D906, Q5ZKY2, NP_006386.1 |
| **Reactivity** | Human |
| **Predicted** | Chicken, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB29229 |
| **Calculated MW** | 77960 |
| **Antigen Region** | 540-569 |

## Additional Information

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| **Gene ID** | 10533 |
| **Other Names** | Ubiquitin-like modifier-activating enzyme ATG7, ATG12-activating enzyme E1 ATG7, Autophagy-related protein 7, APG7-like, hAGP7, Ubiquitin-activating enzyme E1-like protein, ATG7, APG7L |
| **Target/Specificity** | This APG7L antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 540-569 amino acids from human APG7L. |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | APG7L Antibody(D555) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | ATG7 ( HGNC:16935) |

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| **Synonyms** | APG7L |
| **Function** | E1-like activating enzyme involved in the 2 ubiquitin-like systems required for cytoplasm to vacuole transport (Cvt) and autophagy. Activates ATG12 for its conjugation with ATG5 as well as the ATG8 family proteins for their conjugation with phosphatidylethanolamine. Both systems are needed for the ATG8 association to Cvt vesicles and autophagosomes membranes. Required for autophagic death induced by caspase-8 inhibition. Facilitates LC3-I lipidation with phosphatidylethanolamine to form LC3-II which is found on autophagosomal membranes (PubMed:34161705). Required for mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production. Modulates p53/TP53 activity to regulate cell cycle and survival during metabolic stress. Also plays a key role in the maintenance of axonal homeostasis, the prevention of axonal degeneration, the maintenance of hematopoietic stem cells, the formation of Paneth cell granules, as well as in adipose differentiation. Plays a role in regulating the liver clock and glucose metabolism by mediating the autophagic degradation of CRY1 (clock repressor) in a time-dependent manner (By similarity). |
| **Cellular Location** | Cytoplasm. Preautophagosomal structure. Note=Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme |
| **Tissue Location** | Widely expressed, especially in kidney, liver, lymph nodes and bone marrow. |

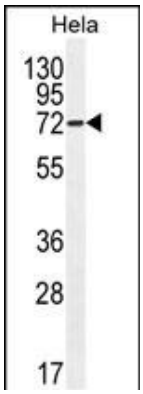
## Background

This gene was identified based on homology to Pichia pastoris GSA7 and Saccharomyces cerevisiae APG7. In the yeast, the protein appears to be required for fusion of peroxisomal and vacuolar membranes. The protein shows homology to the ATP-binding and catalytic sites of the E1 ubiquitin activating enzymes.

## References

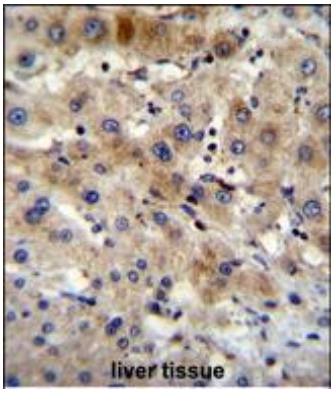

Metzger, S., et al. Hum. Genet. 128(4):453-459(2010)
Zhao, Y., et al. Nat. Cell Biol. 12(7):665-675(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Xue, L.Y., et al. Autophagy 6(2):248-255(2010)
Zhu, K., et al. Oncogene 29(3):451-462(2010)


## Images

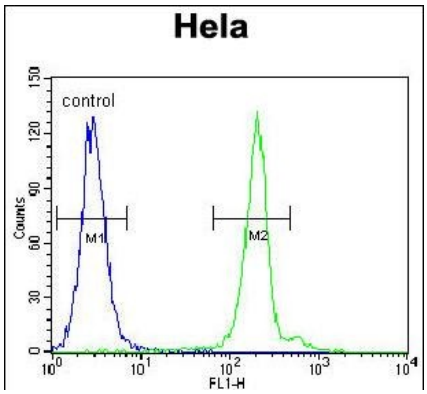



hAPG7L-D555 (PEI 1:100)b (Cat. #AP11191a) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the APG7L antibody detected the APG7L protein (arrow).

APG7L Antibody(D555) (Cat.




#AP11191a)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of APG7L Antibody(D555) for immunohistochemistry. Clinical relevance has not been evaluated.




APG7L Antibody (Cat. #AP11191a) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.