

**Anti-APG7 (RABBIT) Antibody**  
**APG7 Antibody**  
**Catalog # ASR5257****Specification**

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**Anti-APG7 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 78 kDa in size corresponding to human Apg7 by western blotting in the appropriate cell lysate or extract. Human Apg7 has been reported to form a homodimer at approximately 160 kDa.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region near aa 550-575 of Human Apg7 protein.
Preservative	0.01% (w/v) Sodium Azide

**Anti-APG7 (RABBIT) Antibody - Additional Information****Gene ID** 10533**Other Names**  
10533**Purity**

This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. Reactivity occurs against human Apg7 protein. However, BLAST analysis indicates 100% homology (12/12) for this protein from human, chimpanzee, mouse, rat, dog, and chicken sources. The core amino acids of the immunogen, G-D-S-T-R-D-R-T are 100% identical (8/8) in D. melanogaster. Reactivity with Apg7 proteins from other sources is not known.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

**Anti-APG7 (RABBIT) Antibody - Protein Information**

**Name** ATG7 ([HGNC:16935](#))

**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](http://www.uniprot.org/citations/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.

**Anti-APG7 (RABBIT) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-APG7 (RABBIT) Antibody - Images****Anti-APG7 (RABBIT) Antibody - Background**

Apg7 is the human gene product similar in 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.