

ATG9A Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1814b

Specification

ATG9A Antibody (Center) - Product Information

Application	WB, IHC-P,E
Primary Accession	O7Z3C6
Other Accession	O5FWU3 , O68FE2 , O3T904
Reactivity	Human, Mouse
Predicted	Bovine, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	94447
Antigen Region	252-281

ATG9A Antibody (Center) - Additional Information

Gene ID 79065

Other Names

Autophagy-related protein 9A, APG9-like 1, mATG9, ATG9A, APG9L1

Target/Specificity

This ATG9A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 252-281 amino acids from the Central region of human ATG9A.

Dilution

WB~~1:1000
IHC-P~~1:50~100

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

ATG9A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

ATG9A Antibody (Center) - Protein Information

Name ATG9A {ECO:0000303|PubMed:20124090, ECO:0000312|HGNC:HGNC:22408}

Function Phospholipid scramblase involved in autophagy by mediating autophagosomal membrane expansion (PubMed:[22456507](#), PubMed:[27510922](#), PubMed:[29437695](#), PubMed:[32513819](#), PubMed:[32610138](#), PubMed:[33106659](#), PubMed:[33468622](#), PubMed:[33850023](#)). Cycles between the preautophagosomal structure/phagophore assembly site (PAS) and the cytoplasmic vesicle pool and supplies membrane for the growing autophagosome (PubMed:[16940348](#), PubMed:[22456507](#), PubMed:[33106659](#)). Lipid scramblase activity plays a key role in preautophagosomal structure/phagophore assembly by distributing the phospholipids that arrive through ATG2 (ATG2A or ATG2B) from the cytoplasmic to the luminal leaflet of the bilayer, thereby driving autophagosomal membrane expansion (PubMed:[33106659](#)). Also required to supply phosphatidylinositol 4- phosphate to the autophagosome initiation site by recruiting the phosphatidylinositol 4-kinase beta (PI4KB) in a process dependent on ARFIP2, but not ARFIP1 (PubMed:[30917996](#)). In addition to autophagy, also plays a role in necrotic cell death (By similarity).

Cellular Location

Preautophagosomal structure membrane; Multi-pass membrane protein. Cytoplasmic vesicle, autophagosome membrane; Multi- pass membrane protein. Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass membrane protein. Recycling endosome membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Note=Mainly localizes to the trans-Golgi network (TGN) and the endosomal system; cycles between them though vesicle trafficking (PubMed:[27316455](#), PubMed:[27663665](#)). Export from the TGN to promote formation of autophagosomes is mediated by the AP-4 complex (PubMed:[29180427](#), PubMed:[30262884](#)). Under amino acid starvation or rapamycin treatment, redistributes to preautophagosomal structure/phagophore assembly site (PAS) (PubMed:[16940348](#)). The starvation-induced redistribution depends on ULK1, ATG13, as well as SH3GLB1 (PubMed:[16940348](#)). Upon autophagy induction, a small portion transiently localizes to the autophagic membranes (PubMed:[22456507](#)) Recruited to damaged mitochondria during mitophagy in a RIMOC1- dependent manner (PubMed:[34432599](#)).

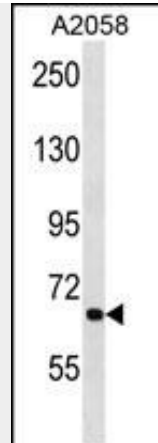
ATG9A Antibody (Center) - Protocols

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

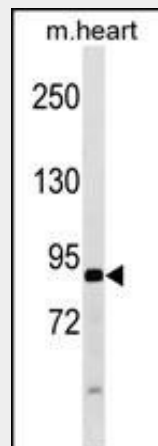
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ATG9A Antibody (Center) - Images

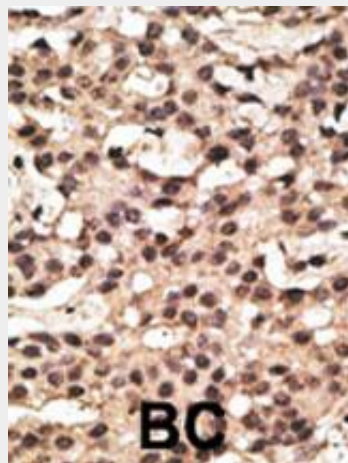




APG9L1 Antibody (W267) (Cat. #AP1814b) western blot analysis in A2058 cell line lysates (35ug/lane). This demonstrates the APG9L1 antibody detected the APG9L1 protein (arrow).



APG9L1 Antibody (W267) (Cat. #AP1814b) western blot analysis in mouse heart tissue lysates (35ug/lane). This demonstrates the APG9L1 antibody detected the APG9L1 protein (arrow).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

ATG9A Antibody (Center) - Background

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic

constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole).

Apg9 plays a direct role in the formation of the cytoplasm to vacuole targeting and autophagic vesicles, possibly serving as a marker for a specialized compartment essential for these vesicle-mediated alternative targeting pathways.

ATG9A Antibody (Center) - References

- Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005)
- Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005)
- Greenberg JT. Dev Cell. 8(6):799-801. (2005)
- Levine B. Cell. 120(2):159-62. (2005)
- Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004)