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ATG9A Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1814C

Specification

ATG9A Antibody (C-term) - Product Information

Application	**IF, WB, IHC-P,E**
Primary Accession	Q7Z3C6
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Antigen Region	**717-746**

ATG9A Antibody (C-term) - Additional Information

Gene ID 79065

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

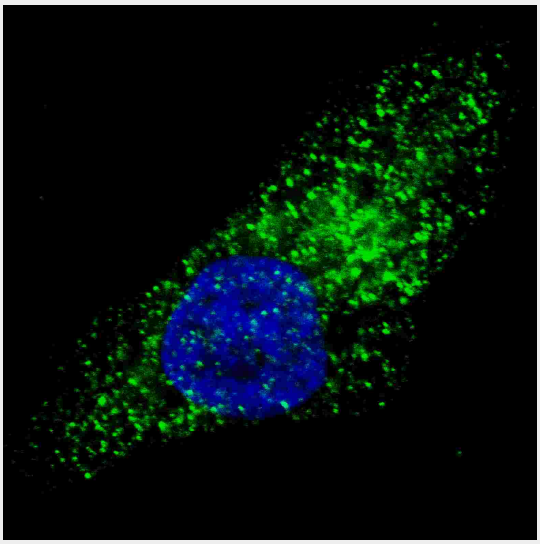
Target/Specificity
This ATG9A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 717-746 amino acids from the C-terminal region of human ATG9A.

Dilution
IF~~1:100
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 (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.



Fluorescent image of U251 cells stained with ATG9A (C-term) antibody. U251 cells were treated with Chloroquine (50 µM,16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP1814c ATG9A (C-term) primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). ATG9A immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells.

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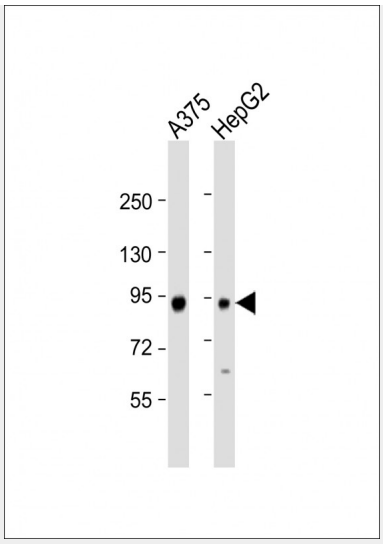
ATG9A Antibody (C-term) - Protein Information

Name ATG9A

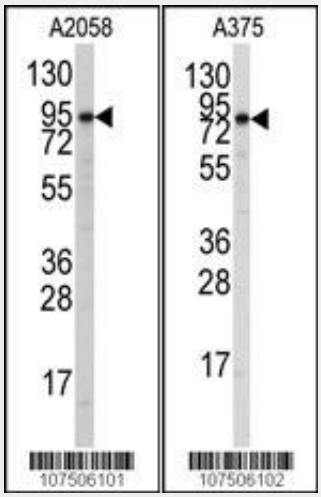
Synonyms APG9L1

Function
Involved in autophagy and cytoplasm to vacuole transport (Cvt) vesicle formation. Plays a key role in the organization of the preautophagosomal structure/phagophore assembly site (PAS), the nucleating site for formation of the sequestering vesicle. Cycles between a juxta-nuclear trans-Golgi network compartment and late endosomes. Nutrient starvation induces accumulation on autophagosomes. Starvation-dependent trafficking requires ULK1, ATG13 and SUPT20H.

Cellular Location
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. Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=Under amino acid starvation or rapamycin treatment, redistributes from a juxtanuclear clustered pool to a dispersed peripheral cytosolic pool. The starvation-induced redistribution depends on ULK1, ATG13, as well as SH3GLB1



All lanes : Anti-APG9L1 Antibody (R732) at 1:1000 dilution Lane 1: A375 whole cell lysate Lane 2: HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 94 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of anti-Autophagy APG9L1 Antibody (C-term) (Cat.#AP1814c) in A2058 and A375 cell line lysates (35ug/lane). APG9L1(arrow) was detected using the purified Pab.

ATG9A Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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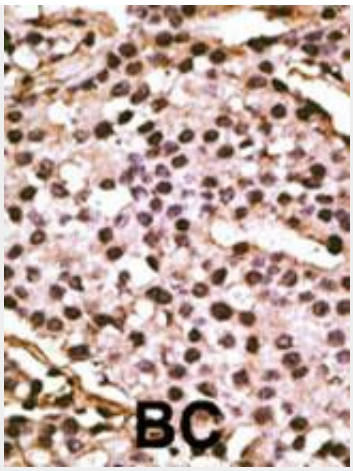

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast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

ATG9A Antibody (C-term) - 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 (C-term) - References

References for protein:
1.Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005)
2.Lum JJ, et al. Nat Rev Mol Cell Biol.

6(6):439-48. (2005)
3.Greenberg JT. Dev Cell. 8(6):799-801. (2005)
4.Levine B. Cell. 120(2):159-62. (2005)
5.Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004)
References for U251 cell line:
1. Westermark B.; Pontén J.; Hugosson R. (1973).” Determinants for the establishment of permanent tissue culture lines from human gliomas”. Acta Pathol Microbiol Scand A. 81:791-805. [PMID: 4359449].
2. Pontén, J.,Westermark B. (1978).” Properties of Human Malignant Glioma Cells in Vitro”. Medical Biology 56: 184-193.[PMID: 359950].
3. Geng Y.;Kohli L.; Klocke B.J.; Roth K.A.(2010). “Chloroquine-induced autophagic vacuole accumulation and cell death in glioma cells is p53 independent”. Neuro Oncol. 12(5): 473–481.[PMID: 20406898].

ATG9A Antibody (C-term) - Citations

- Therapeutic potential of a synthetic lethal interaction between the MYC proto-oncogene and inhibition of aurora-B kinase.
- Biochemical isolation and characterization of the tubulovesicular LC3-positive autophagosomal compartment.