

Rabbit ATG7 Polyclonal Antibody | anti-ATG7 antibody

ATG7 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA289393	Rabbit	Human, mouse (Predicted Reactivity: Rat)	Immunohistochemistry, Western Blot, ELISA, Immunofluorescence

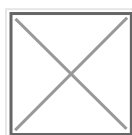
PRODUCT SYNONYMS

ATG7; Polyclonal Antibody; ATG7 Antibody; Ubiquitin-like modifier-activating enzyme ATG7; ATG12-activating enzyme E1 ATG7; Autophagy-related protein 7; APG7-like; hAGP7; Ubiquitin-activating enzyme E1-like protein; APG7L; anti-ATG7 antibody

PRODUCT SPECIFICATIONS

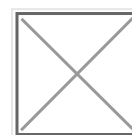
Host	Rabbit
Reactivity	Human, mouse (Predicted Reactivity: Rat)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This ATG7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 494-523 amino acids from human ATG7.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/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.
Concentration	Vial Concentration: 2 (varies by lot)
Sequence Positions	494-523
Sequence Length	623
Applicable Applications for anti-ATG7 antibody	IHC (Immunohistochemistry), WB (Western Blot), ELISA, IF (Immunofluorescence)
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES



IHC (Immunohistochemistry)

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



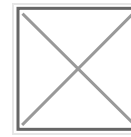
WB (Western Blot)

APG7L Antibody (R509) western blot analysis in Hela cell line lysates (35ug/lane). This demonstrates the APG7L antibody detected the APG7L protein (arrow).



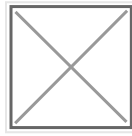
WB (Western Blot)

The anti-APG7L Pab is used in Western blot to detect APG7L in mouse liver tissue lysate. APG7L (arrow) was detected using the purified Pab.



WB (Western Blot)

Western blot analysis of anti-hAPG7L-R509 Pab in 293 cell line lysates transiently transfected with the ATG7 gene (2ug/lane). hAPG7L-R509 (arrow) was detected using the purified Pab.



IF (Immunofluorescence)

Fluorescent image of U251 cells stained with ATG7 antibody. U251 cells were treated with Chloroquine (50 uM, 16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AAA289393 ATG7 primary antibody (1:200, 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 ug/ml, 5 min). ATG7 immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells, supported by Human Protein Atlas Data (<http://www.proteinatlas.org/ENSG00000197548>).

ADDITIONAL INFORMATION

Related Product Information for anti-ATG7 antibody	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). APG7 functions as an E1 enzyme essential for multisubstrates such as GABARAPL1 and ATG12. APG3L is an E2-like conjugating enzyme facilitating covalent binding of APG8 (MAP1LC3) to phosphatidylethanolamine (PE). APG7 (an E1-like enzyme) facilitates this reaction by forming an E1-E2 complex with APG3. Formation of the PE conjugate is essential for autophagy.
Product Categories/Family for anti-ATG7 antibody	Cancer ; Cardiovascular ; Cell Biology ; Metabolism ; Signal Transduction ; Phospho Antibodies
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) 6. Tanida I., et al. Biochem. Biophys. Res. Commun. 292:256-262(2002) 7. Tanida I., et al. J. Biol. Chem. 277:13739-13744(2002) 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].

NCBI AND UNIPROT INFORMATION

NCBI GI #	222144227
NCBI GeneID	10533
NCBI Accession #	NP_001129503.2 ; NP_001138384.1 ; NP_006386.1

NCBI GenBank Nucleotide #	NM_001136031.2
UniProt Accession #	O95352 ; Q7L8L0 ; Q9BWP2 ; Q9UFH4 ; B4E170 ; E9PB95
Molecular Weight	77960
NCBI Official Full Name	ubiquitin-like modifier-activating enzyme ATG7 isoform b
NCBI Official Synonym Full Names	autophagy related 7
NCBI Official Symbol	ATG7
NCBI Official Synonym Symbols	GSA7; APG7L; APG7-LIKE
NCBI Protein Information	ubiquitin-like modifier-activating enzyme ATG7
UniProt Protein Name	Ubiquitin-like modifier-activating enzyme ATG7
UniProt Gene Name	ATG7
UniProt Synonym Gene Names	APG7L; APG7-like; hAGP7
UniProt Entry Name	ATG7_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/atg7-antibody-immunohistochemistry-western-blot-immunofluorescence-elisa/289393>