

ARG54916 anti-ATG7 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ATG7
Tested Reactivity	Hu, Ms
Tested Application	ELISA, ICC/IF, WB
Specificity	At least three isoforms of APG7 are known to exist; this antibody will detect all three isoforms. APG7 antibody is predicted not to cross-react with other ATG family proteins.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ATG7
Species	Human
Immunogen	Synthetic peptide (17 aa) within aa. 590-640 of Human APG7.
Conjugation	Un-conjugated
Alternate Names	Ubiquitin-like modifier-activating enzyme ATG7; hAGP7; Autophagy-related protein 7; GSA7; Ubiquitin-activating enzyme E1-like protein; APG7-LIKE; APG7L; APG7-like; ATG12-activating enzyme E1 ATG7

Application Instructions

Application table	Application	Dilution
	ELISA	Assay-dependent
	ICC/IF	10 - 20 µg/ml
	WB	0.5 - 2 µg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	Caco-2 Cell Lysate	

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS and 0.02% Sodium azide
Preservative	0.02% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed

before use.

Note

For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links

[GeneID: 10533 Human](#)

[GeneID: 74244 Mouse](#)

[Swiss-port # O95352 Human](#)

[Swiss-port # Q9D906 Mouse](#)

Gene Symbol

ATG7

Gene Full Name

autophagy related 7

Background

APG7 Antibody: Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components. This process is negatively regulated by TOR (Target of rapamycin) through phosphorylation of autophagy protein APG1. Another member of the autophagy family of proteins is APG7 which was identified in yeast as a ubiquitin-E1-like enzyme; this function is conserved in the mammalian homolog. In mammalian cells, APG7 is essential for autophagy conjugation systems, autophagosome formation, starvation-induced bulk degradation of proteins and organelles. It has been suggested that caspase-8 may alter APG7 levels and thus the APG7 program of autophagic cell death.

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. 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. Plays also 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. [UniProt]

Research Area

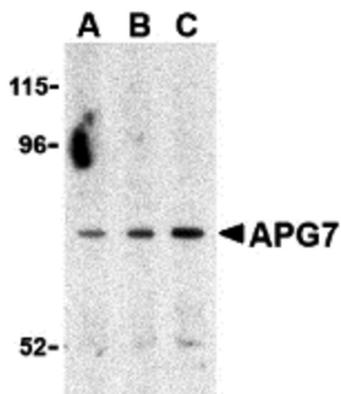
Cancer antibody; Cell Biology and Cellular Response antibody; Cell Death antibody; Metabolism antibody; Signaling Transduction antibody

Calculated Mw

78 kDa

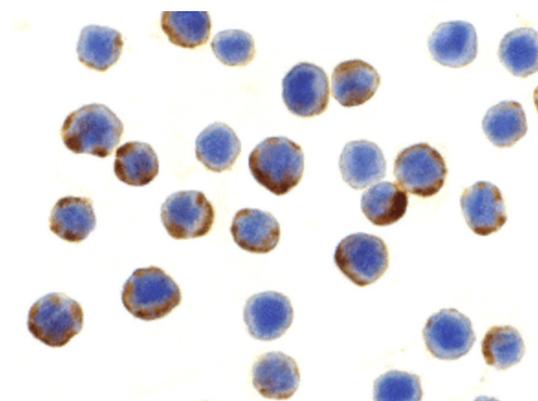
PTM

Acetylated by EP300.



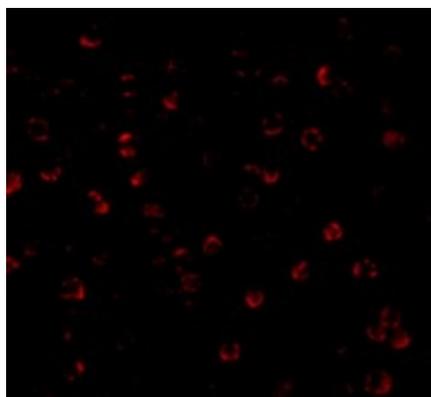
ARG54916 anti-ATG7 antibody WB image

Western blot: Caco-2 cell lysate stained with ARG54916 anti-ATG7 antibody at (A) 0.5, (B) 1 and (C) 2 ug/ml dilution.



ARG54916 anti-ATG7 antibody ICC/IF image

Immunocytochemistry: MCF7 cells stained with ARG54916 anti-ATG7 antibody at 10 ug/ml dilution.



ARG54916 anti-ATG7 antibody ICC/IF image

Immunofluorescence: MCF7 cells stained with ARG54916 anti-ATG7 antibody at 20 ug/ml dilution.
