

## ARG54823 anti-ATG7 antibody

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes ATG7
Tested Reactivity	Hu, Ms
Predict Reactivity	Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ATG7
Species	Human
Immunogen	KLH-conjugated synthetic peptide corresponding to aa. 494-523 of Human ATG7.
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
	ICC/IF	1:200
	IHC-P	Assay-dependent
	WB	1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	HeLa	

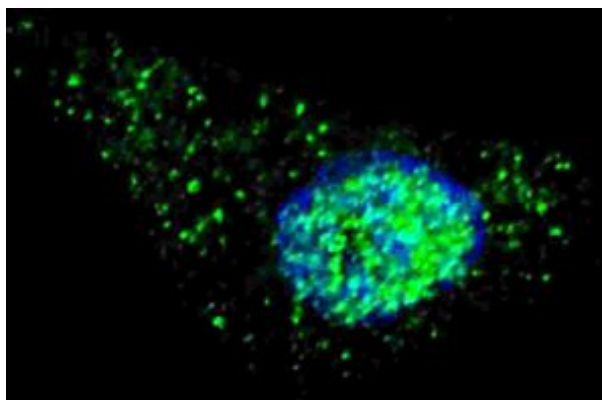
### Properties

Form	Liquid
Purification	This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Buffer	PBS and 0.09% (W/V) Sodium azide
Preservative	0.09% (W/V) Sodium azide
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.

## Bioinformation

Database links	<a href="#">GeneID: 10533 Human</a> <a href="#">GeneID: 74244 Mouse</a> <a href="#">Swiss-port # O95352 Human</a> <a href="#">Swiss-port # Q9D906 Mouse</a>
Gene Symbol	ATG7
Gene Full Name	autophagy related 7
Background	This gene was identified based on 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. [provided by RefSeq, Jan 2009]
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.
Cellular Localization	Cytoplasm. Preautophagosomal structure. Note=Localizes also to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme

## Images



ARG54823 anti-ATG7 antibody ICC/IF image

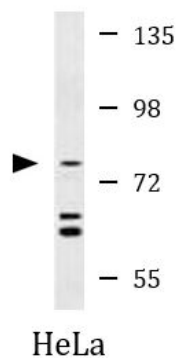
Immunofluorescence: U251 cells were treated with Chloroquine (50  $\mu$ M, 16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then stained with ARG54823 anti-ATG7 antibody (green) at 1:200 dilution, 2 h at room temperature. Nuclei were counterstained with Hoechst 33342 (blue) (10  $\mu$ g/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>).



ARG54823 anti-ATG7 antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human cancer tissue stained with ARG54823 anti-ATG7 antibody.



ARG54823 anti-ATG7 antibody WB image

Western blot: 35 µg of HeLa cell lysate stained with ARG54823 anti-ATG7 antibody.