

# ATG7 mouse Monoclonal Antibody(3D6)

Catalog # AP63849

## Product Information

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<b>Application</b>	IHC-P, IF
<b>Primary Accession</b>	<a href="#">O95352</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Calculated MW</b>	77960

## Additional Information

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<b>Gene ID</b>	10533
<b>Other Names</b>	Ubiquitin-like modifier-activating enzyme ATG7 (ATG12-activating enzyme E1 ATG7) (Autophagy-related protein 7) (APG7-like) (hAGP7) (Ubiquitin-activating enzyme E1-like protein)
<b>Dilution</b>	IHC-P~~N/A IF~~IF: 1:50-200 IHC-p 1:50-300
<b>Format</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
<b>Storage Conditions</b>	-20°C

## Protein Information

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<b>Name</b>	ATG7 ( <a href="#">HGNC:16935</a> )
<b>Synonyms</b>	APG7L
<b>Function</b>	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. Facilitates LC3-I lipidation with phosphatidylethanolamine to form LC3-II which is found on autophagosomal membranes (PubMed: <a href="#">34161705</a> ). 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. Also plays 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. Plays a role in

regulating the liver clock and glucose metabolism by mediating the autophagic degradation of CRY1 (clock repressor) in a time-dependent manner (By similarity).

#### Cellular Location

Cytoplasm. Preautophagosomal structure. Note=Also localizes to discrete punctae along the ciliary axoneme and to the base of the ciliary axoneme

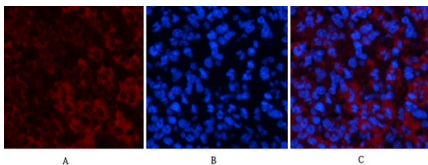
#### Tissue Location

Widely expressed, especially in kidney, liver, lymph nodes and bone marrow.

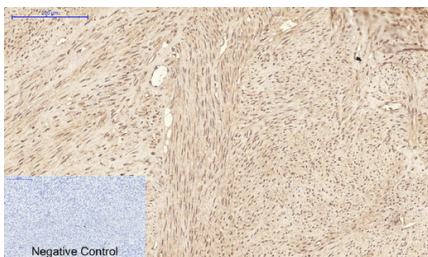
## Background

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. Plays a role in regulating the liver clock and glucose metabolism by mediating the autophagic degradation of CRY1 (clock repressor) in a time-dependent manner (By similarity).

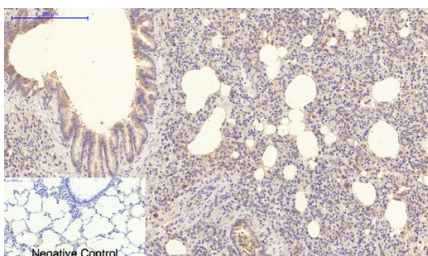
## Images



Immunofluorescence analysis of mouse-spleen tissue. 1,ATG7 Mouse Monoclonal Antibody(3D6)(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Human-uterus tissue. 1,ATG7 Mouse Monoclonal Antibody(3D6) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,ATG7 Mouse Monoclonal Antibody(3D6) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.