

ATG7
Purified Mouse Monoclonal Antibody
Catalog # AO2527a**Specification**

ATG7 - Product Information

Application	WB, IHC, ICC, E
Primary Accession	O95352
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG2b
Calculated MW	78kDa KDa

Immunogen

Purified recombinant fragment of human ATG7 (AA: 558-703) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

ATG7 - Additional Information

Gene ID 10533

Other Names

GSA7; APG7L; APG7-LIKE

Dilution

WB~~ 1/500 - 1/2000

IHC~~1:100~500

ICC~~N/A

E~~ 1/10000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

ATG7 is for research use only and not for use in diagnostic or therapeutic procedures.

ATG7 - Protein Information

Name ATG7 ([HGNC:16935](#))

Synonyms APG7L

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. Facilitates LC3-I lipidation with phosphatidylethanolamine to form LC3-II which is found on autophagosomal membranes (PubMed: [34161705](http://www.uniprot.org/citations/34161705)). 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.

ATG7 - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ATG7 - Images

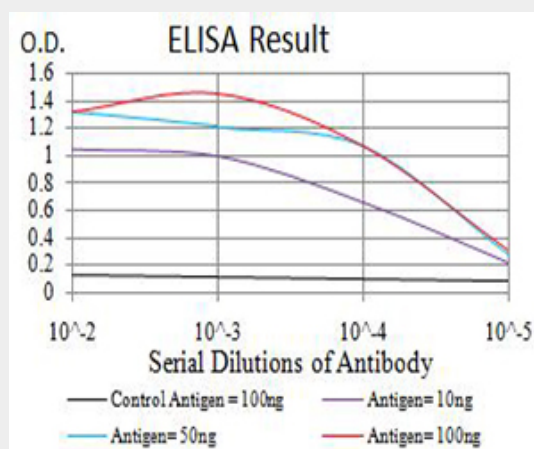


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

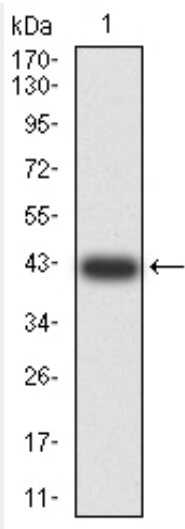


Figure 2: Western blot analysis using ATG7 mAb against human ATG7 (AA: 558-703) recombinant protein. (Expected MW is 41.9 kDa)

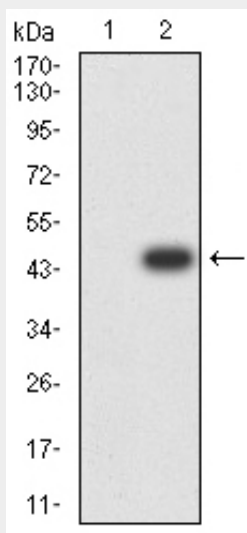


Figure 3: Western blot analysis using ATG7 mAb against HEK293 (1) and ATG7 (AA: 558-703)-hlgGfC transfected HEK293 (2) cell lysate.

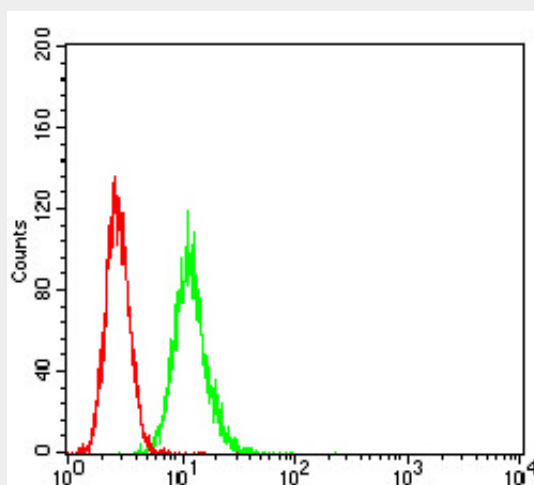


Figure 4: Flow cytometric analysis of HeLa cells using ATG7 mouse mAb (green) and negative

control (red).

ATG7 - References

1.Oncotarget. 2014 Mar 30;5(6):1526-37.2.J Biol Chem. 2012 Oct 12;287(42):35576-88.