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ATG7

Purified Mouse Monoclonal Antibody
Catalog # AO2527a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	O95352
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7D3E5
Isotype	Mouse IgG2b
Calculated MW	77960
Immunogen	Purified recombinant fragment of human ATG7 (AA: 558-703) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

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.

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). 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.

References

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

Images

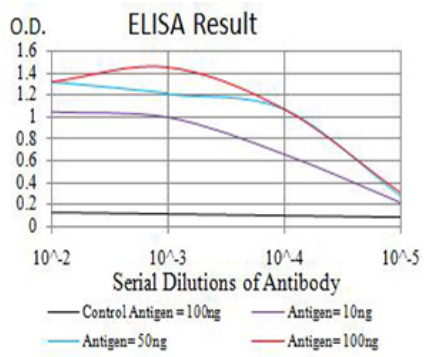


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

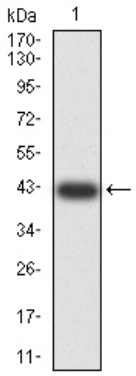
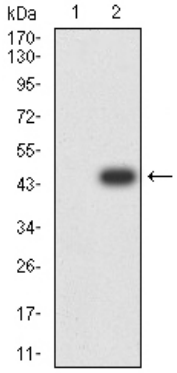


Figure 2:Western blot analysis using ATG7 mAb against human ATG7 (AA: 558-703) recombinant protein. (Expected MW is 41.9 kDa)

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



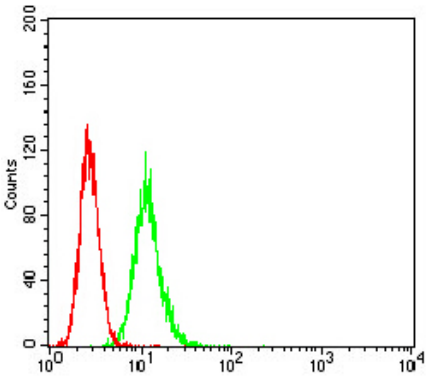


Figure 4:Flow cytometric analysis of HeLa cells using ATG7 mouse mAb (green) and negative control (red).

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