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Anti-Apg3 (Atg3) Rabbit Monoclonal Antibody

Catalog # ABO14107

Product Information

Application	WB, IHC, IF, ICC
Primary Accession	Q9NT62
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Apg3 (Atg3) Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	64422
Other Names	Ubiquitin-like-conjugating enzyme ATG3, 2.3.2.-, Autophagy-related protein 3, APG3-like, hApg3, Protein PC3-96 {ECO:0000305|Ref.2}, ATG3 (HGNC:20962), APG3, APG3L
Calculated MW	35864
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:50-1:200
Subcellular Localization	Cytoplasm.
Tissue Specificity	Widely expressed, with a highest expression in heart, skeletal muscle, kidney, liver and placenta..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: ABBC-1
Immunogen	A synthesized peptide derived from human Apg3 (Atg3)
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	ATG3 (HGNC:20962)
Synonyms	APG3, APG3L
Function	E2 conjugating enzyme that catalyzes the covalent conjugation of the C-terminal Gly of ATG8-like proteins (GABARAP, GABARAPL1, GABARAPL2 or MAP1LC3A) to the amino group of phosphatidylethanolamine (PE)-containing lipids in the membrane resulting in membrane-bound ATG8-like proteins which is one of the key steps in the development of autophagic isolation membranes during autophagosome formation (PubMed:24191030, PubMed:33446636, PubMed:37252361). Cycles back and forth between binding to ATG7 for loading with the ATG8-like proteins and binding to E3 enzyme, composed of ATG12, ATG5 and ATG16L1 to promote ATG8-like proteins lipidation (PubMed:11825910, PubMed:12207896, PubMed:12890687, PubMed:16704426, PubMed:24186333). Also plays a role as a membrane curvature sensor that facilitates LC3/GABARAP lipidation by sensing local membrane stress associated with lipid-packing defects as occurs with high molar proportions of conical lipids or strident membrane curvature (By similarity). Interacts with negatively-charged membranes promoting membrane tethering and enhancing LC3/GABARAP lipidation (PubMed:29142222). Also acts as an autocatalytic E2-like enzyme by catalyzing the conjugation of ATG12 to itself in an ATG7-dependent manner, this complex thus formed, plays a role in mitochondrial homeostasis but not in autophagy (By similarity). ATG12- ATG3 conjugation promotes late endosome to lysosome trafficking and basal autophagosome maturation via its interaction with PDCD6IP (By similarity). ATG12-ATG3 conjugate is also formed upon viccina virus infection, leading to the disruption the cellular autophagy which is not necessary for vaccinia survival and proliferation (By similarity). Promotes primary ciliogenesis by removing OFD1 from centriolar satellites via the autophagic pathway (By similarity).
Cellular Location	Cytoplasm.
Tissue Location	Widely expressed, with a highest expression in heart, skeletal muscle, kidney, liver and placenta

Images

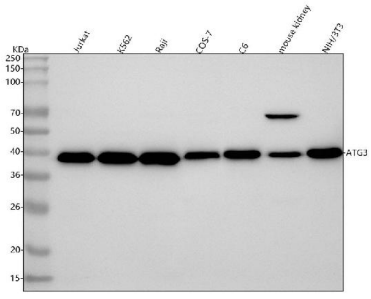


Figure 1. Western blot analysis of Apg3 using anti-Apg3 antibody (M01768).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Jurkat whole cell lysates,
Lane 2: human K562 whole cell lysates,
Lane 3: human Raji whole cell lysates,
Lane 4: monkey COS-7 whole cell lysates,
Lane 5: rat C6 whole cell lysates,
Lane 6: mouse kidney tissue lysates,
Lane 7: mouse NIH/3T3 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Apg3 antigen affinity purified monoclonal antibody (Catalog # M01768) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each

and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Apg3 at approximately 40 kDa. The expected band size for Apg3 is at 36 kDa.

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