

ATG3 Rabbit mAb

Catalog # AP75119

Product Information

Application	WB, IHC-P, IHC-F, ICC
Primary Accession	Q9NT62
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	35864

Additional Information

Gene ID	64422
Other Names	ATG3
Dilution	WB~~1/500-1/1000 IHC-P~~N/A IHC-F~~N/A ICC~~N/A
Format	Liquid

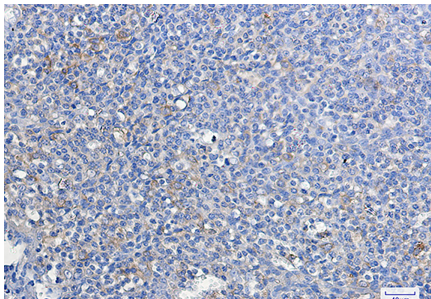
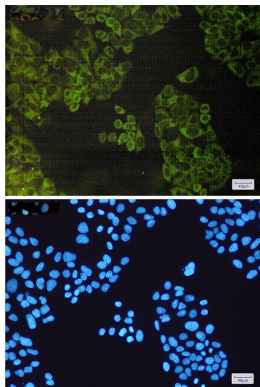
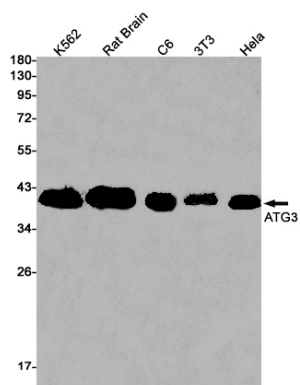
Protein Information

Name	ATG3 (HGNC:20962)
Synonyms	APG3, APG3L
Function	<p>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</p>

to lysosome trafficking and basal autophagosome maturation via its interaction with PDCD6IP (By similarity). ATG12-ATG3 conjugate is also formed upon vaccinia 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



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