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APG3(cleaved) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3740a

Product Information

Application	DB, E
Primary Accession	Q9NT62
Other Accession	Q6AZ50, Q9CPX6, Q6PFS7, Q0VCL3
Reactivity	Human
Predicted	Bovine, Mouse, Rat, Zebrafish
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18431
Calculated MW	35864
Antigen Region	90-104

Additional Information

Gene ID	64422
Other Names	Ubiquitin-like-conjugating enzyme ATG3, 632-, Autophagy-related protein 3, APG3-like, hApg3, Protein PC3-96, ATG3, APG3, APG3L
Target/Specificity	This APG3-cleaved Antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide 90-104aa selected from human APG3.
Dilution	DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	APG3(cleaved) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

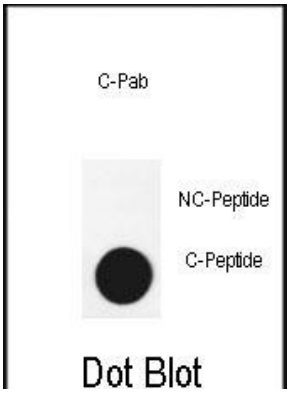
Name	ATG3 (HGNC:20962)
Synonyms	APG3, APG3L
Function	E2 conjugating enzyme that catalyzes the covalent conjugation of the

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



Dot blot analysis of anti-APG3-cleaved Pab (Cat. #AP3740a) on nitrocellulose membrane. 50ng of Cleaved-peptide or Non Cleaved-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.