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KD-Validated Anti-ATG9A Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1178

Product Information

Application	WB, FC, ICC
Primary Accession	Q7Z3C6
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB3245
Calculated MW	94447
Gene Name	ATG9A
Aliases	ATG9A; Autophagy Related 9A; APG9L1; Autophagy-Related Protein 9A; APG9-Like 1; FLJ22169; MATG9; ATG9 Autophagy Related 9 Homolog A (S. Cerevisiae); APG9 Autophagy 9-Like 1 (S. Cerevisiae); ATG9 Autophagy Related 9 Homolog A; Autophagy 9-Like 1 Protein; APG9 Autophagy 9-Like 1; MGD3208
Immunogen	A synthesized peptide derived from human ATG9A

Additional Information

Gene ID	79065
Other Names	Autophagy-related protein 9A, APG9-like 1, mATG9, ATG9A {ECO:0000303|PubMed:20124090, ECO:0000312|HGNC:HGNC:22408}

Protein Information

Name	ATG9A {ECO:0000303|PubMed:20124090, ECO:0000312|HGNC:HGNC:22408}
Function	Phospholipid scramblase involved in autophagy by mediating autophagosomal membrane expansion (PubMed:22456507, PubMed:27510922, PubMed:29437695, PubMed:32513819, PubMed:32610138, PubMed:33106659, PubMed:33468622, PubMed:33850023). Cycles between the preautophagosomal structure/phagophore assembly site (PAS) and the cytoplasmic vesicle pool and supplies membrane for the growing autophagosome (PubMed:16940348, PubMed:22456507, PubMed:33106659). Lipid scramblase activity plays a key role in preautophagosomal structure/phagophore assembly by distributing the phospholipids that arrive through ATG2 (ATG2A or ATG2B) from the cytoplasmic to the luminal leaflet of the bilayer, thereby driving autophagosomal membrane expansion (PubMed:33106659). Also required to supply phosphatidylinositol 4- phosphate to the autophagosome initiation site by recruiting the phosphatidylinositol 4-kinase beta (PI4KB) in a process dependent on ARFIP2, but not ARFIP1 (PubMed:30917996). In addition to

	autophagy, also plays a role in necrotic cell death (By similarity).
Cellular Location	Preautophagosomal structure membrane; Multi-pass membrane protein. Cytoplasmic vesicle, autophagosome membrane; Multi- pass membrane protein. Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass membrane protein. Recycling endosome membrane; Multi-pass membrane protein. Endoplasmic reticulum membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Note=Mainly localizes to the trans-Golgi network (TGN) and the endosomal system; cycles between them though vesicle trafficking (PubMed:27316455, PubMed:27663665). Export from the TGN to promote formation of autophagosomes is mediated by the AP-4 complex (PubMed:29180427, PubMed:30262884). Under amino acid starvation or rapamycin treatment, redistributes to preautophagosomal structure/phagophore assembly site (PAS) (PubMed:16940348). The starvation-induced redistribution depends on ULK1, ATG13, as well as SH3GLB1 (PubMed:16940348). Upon autophagy induction, a small portion transiently localizes to the autophagic membranes (PubMed:22456507) Recruited to damaged mitochondria during mitophagy in a RIMOC1- dependent manner (PubMed:34432599).

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