

Phospho-ATG9A(S738) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3515a**Specification**

Phospho-ATG9A(S738) Antibody Blocking peptide - Product InformationPrimary Accession [Q7Z3C6](#)**Phospho-ATG9A(S738) Antibody Blocking peptide - Additional Information****Gene ID** 79065**Other Names**

Autophagy-related protein 9A, APG9-like 1, mATG9, ATG9A, APG9L1

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP3515a](/products/AP3515a) was selected from the region of human Phospho-APG9L1-S738. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-ATG9A(S738) Antibody Blocking peptide - 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](http://www.uniprot.org/citations/22456507), PubMed: [27510922](http://www.uniprot.org/citations/27510922), PubMed: [29437695](http://www.uniprot.org/citations/29437695), PubMed: [32513819](http://www.uniprot.org/citations/32513819), PubMed: [33468622](http://www.uniprot.org/citations/33468622), PubMed: [33850023](http://www.uniprot.org/citations/33850023), PubMed: [32610138](http://www.uniprot.org/citations/32610138), PubMed: [33106659](http://www.uniprot.org/citations/33106659)). Cycles between the preautophagosomal structure/phagophore assembly site (PAS) and the cytoplasmic vesicle pool and supplies membrane for the growing autophagosome (PubMed: [16940348](http://www.uniprot.org/citations/16940348))

target="_blank">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).

Phospho-ATG9A(S738) Antibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

Phospho-ATG9A(S738) Antibody Blocking peptide - Images

Phospho-ATG9A(S738) Antibody Blocking peptide - Background

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). Apg9 plays a direct role in the formation of the cytoplasm to vacuole targeting and autophagic vesicles, possibly serving as a marker for a specialized compartment essential for these vesicle-mediated alternative targeting pathways.

Phospho-ATG9A(S738) Antibody Blocking peptide - References

Baehrecke EH. Nat Rev Mol Cell Biol. 6(6):505-10. (2005) Lum JJ, et al. Nat Rev Mol Cell Biol. 6(6):439-48. (2005) Greenberg JT. Dev Cell. 8(6):799-801. (2005) Levine B. Cell. 120(2):159-62. (2005) Shintani T and Klionsky DJ. Science. 306(5698):990-5. (2004)