

Product Information

Anti-Atg9 (C-terminal)

produced in rabbit, affinity isolated antibody

Product number **A0732**

Product Description

Anti-Atg9 (C-terminal) is developed in rabbit using as immunogen a synthetic peptide corresponding to a sequence at C-terminal of human Atg9 (GeneID: 79065), conjugated to KLH via a cysteine residue. The corresponding sequence differs by one amino acid in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti- Atg9 (C-terminal) recognizes human Atg9. The antibody can be used in several applications including immunoblotting (~130 kDa). Detection of the Atg9 band by immunoblotting is specifically inhibited with the immunizing peptide.

Macroautophagy, usually referred to as autophagy, is a major pathway for bulk degradation of cytoplasmic constituents and organelles. In this process, portions of the cytoplasm are sequestered into double membrane vesicles, the autophagosomes, and subsequently delivered to the lysosome for degradation and recycling.^{1,2} Although autophagy is a constitutive cellular event, it is enhanced under certain conditions such as starvation, hormonal stimulation, and drug treatments.³ Autophagy is required for normal turnover of cellular components during starvation. It plays an essential role in cellular differentiation, cell death, and aging. Defective autophagy may contribute to certain human diseases such as cancer, neurodegenerative diseases, muscular disorders, and pathogen infections.^{4,5} Autophagy is an evolutionary conserved pathway seen in all eukaryotic cells.¹ At least 16 ATG genes required for autophagosome formation were identified in yeast by genetic screens. For many of these genes, related homologs have been identified in mammals.⁶

Atg9 is the only transmembrane autophagy protein so far identified. In normal conditions Atg9 cycles between the TGN (trans Golgi) and Rab9- and Rab7-positive endosomes. However, upon starvation Atg9 cycles to an endosomal peripheral pool where it colocalizes with Rab7, LC3, and autophagosomes positives for both.^{7,8} Atg9 also briefly colocalizes with the actin-related protein Arp2, which directly regulates the dynamics of Atg9 movement.⁹

Reagent

The product is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4 containing 15 mM sodium azide as preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: A working concentration of 2–5 µg/mL is recommended using whole extracts of HEK-293T cells expressing human Atg9.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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