

Atg14 (D-19): sc-164767

BACKGROUND

Atg14 (ATG14 autophagy related 14 homolog), also known as BARKOR (beclin 1-associated autophagy-related key regulator) or ATG14L, is a 492 amino acid protein that contains 3 coiled-coil domains in its N-terminal region. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly and mosquito, Atg14 exhibits highest expression in brain and lowest expression in kidney and ovary. Atg14 localizes to isolation membranes of forming autophagosomes, cytoplasm, endoplasmic reticulum and an uncharacterized punctate structure. Necessary for both basal and inducible autophagy, Atg14 plays a role in autophagosome formation and MAP1LC3/LC3 conjugation to phosphatidylethanolamine. Atg14 promotes BECN1 translocation from the *trans*-Golgi network to autophagosomes, and forms a complex with BECN1, PI 3-kinase p100 and p150. Atg14 does not form complexes with KIAA0226/Rubicon or UVRAG, which forms a mutually exclusive complex with BECN1 through direct competition with Atg14.

REFERENCES

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5. Mari, M., et al. 2007. Shaping membranes into autophagosomes. *Nat. Cell Biol.* 9: 1125-1127.
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8. Zhong, Y., et al. 2009. Distinct regulation of autophagic activity by Atg14L and Rubicon associated with Beclin 1-phosphatidylinositol-3-kinase complex. *Nat. Cell Biol.* 11: 468-476.
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CHROMOSOMAL LOCATION

Genetic locus: ATG14 (human) mapping to 14q22.3; Atg14 (mouse) mapping to 14 C1.

SOURCE

Atg14 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Atg14 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164767 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Atg14 (D-19) is recommended for detection of Atg14 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Atg14 siRNA (h): sc-92229, Atg14 siRNA (m): sc-142784, Atg14 shRNA Plasmid (h): sc-92229-SH, Atg14 shRNA Plasmid (m): sc-142784-SH, Atg14 shRNA (h) Lentiviral Particles: sc-92229-V and Atg14 shRNA (m) Lentiviral Particles: sc-142784-V.

Molecular Weight of Atg14 isoform 1: 55 kDa.

Molecular Weight of Atg14 isoform 2: 42 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.