SANTA CRUZ BIOTECHNOLOGY, INC.

Atg2B (Q-18): sc-249975

BACKGROUND

Atg2B (ATG2 autophagy related 2 homolog B) is a 2,078 amino acid protein belonging to the ATG2 family. Encoded by a gene that maps to human chromosome 14q32.2, Atg2B is conserved in chimpanzee, canine, bovine, mouse, chicken, zebrafish, fruit fly, mosquito and *Caenorhabditis elegans*. 16 known human ATG genes exist, of which four (Atg2B, Atg5, Atg9B and Atg12) possess mononucleotide repeats with seven or more nucleotides. Atg2B frameshift mutations may contribute to development of cancer via disruption of autophagy. Atg2B associates with Atg2A, which is also linked to frameshift mutations associated with gastric and colorectal carcinomas with high microsatellite instability, indicating that these two related proteins functionally interact. WIPI-4, which is phylogenetically related to both Atg18p and Atg21p, associates with Atg2B and reciprocally binds Atg2A.

REFERENCES

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3. Rosenfeldt, M.T. and Ryan, K.M. 2009. The role of autophagy in tumour development and cancer therapy. Expert Rev. Mol. Med. 11: e36.
4. Kang, M.R., Kim, M.S., Oh, J.E., Kim, Y.R., Song, S.Y., Kim, S.S., Ahn, C.H., Yoo, N.J. and Lee, S.H. 2009. Frameshift mutations of autophagy-related genes ATG2B, ATG5, ATG9B and ATG12 in gastric and colorectal cancers with microsatellite instability. J. Pathol. 217: 702-706.
5. Park, S.W., Hur, S.Y., Yoo, N.J. and Lee, S.H. 2010. Somatic frameshift mutations of bone morphogenic protein receptor 2 gene in gastric and colorectal cancers with microsatellite instability. APMIS 118: 824-829.
6. Behrends, C., Sowa, M.E., Gygi, S.P. and Harper, J.W. 2010. Network organization of the human autophagy system. Nature 466: 68-76.
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CHROMOSOMAL LOCATION

Genetic locus: ATG2B (human) mapping to 14q32.2; Atg2b (mouse) mapping to 12 E.

SOURCE

Atg2B (Q-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Atg2B 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-249975 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Atg2B (Q-18) is recommended for detection of Atg2B 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); non cross-reactive with Atg2A.

Atg2B (Q-18) is also recommended for detection of Atg2B in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Atg2B siRNA (h): sc-92354, Atg2B siRNA (m): sc-141322, Atg2B shRNA Plasmid (h): sc-92354-SH, Atg2B shRNA Plasmid (m): sc-141322-SH, Atg2B shRNA (h) Lentiviral Particles: sc-92354-V and Atg2B shRNA (m) Lentiviral Particles: sc-141322-V.

Molecular Weight of Atg2B: 233 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.