

Atg9b (E-14): sc-163710

BACKGROUND

All lower eukaryotes possess a single ATG9 gene, and all vertebrates likely possess two genes, ATG9A and ATG9B, suggesting that an ATG9 gene duplication occurred before the divergence of fish. The overlapping orientation of the ATG9B and NOS3 genes is also conserved in mammals and frogs, indicating conservation in vertebrates. Atg9b (ATG9 autophagy related 9 homolog B), also known as SONE, APG9L2 (autophagy 9-like 2 protein) or NOS3AS (nitric oxide synthase 3-overlapping antisense gene protein), is a 924 amino acid protein belonging to the ATG9 family. 16 known human ATG genes exist, of which four (Atg2B, Atg5, Atg9B and Atg12) possess mononucleotide repeats with seven or more nucleotides. Atg9B frameshift mutations may contribute to development of cancer via disruption of autophagy. Encoded by a gene that maps to human chromosome 7q36.1, Atg9b contains between six and eight putative transmembrane domains. Conserved in chimpanzee, canine, bovine, mouse and rat, Atg9b is highly expressed in placenta, pituitary, testis, uterus and lung, and to a lesser extent in most other tissues.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ATG9B (human) mapping to 7q36.1; Atg9b (mouse) mapping to 5 A3.

SOURCE

Atg9b (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of Atg9b 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-163710 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Atg9b (E-14) is recommended for detection of Atg9b 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 Atg9a.

Atg9b (E-14) is also recommended for detection of Atg9b in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Atg9b siRNA (h): sc-89347, Atg9b siRNA (m): sc-141326, Atg9b shRNA Plasmid (h): sc-89347-SH, Atg9b shRNA Plasmid (m): sc-141326-SH, Atg9b shRNA (h) Lentiviral Particles: sc-89347-V and Atg9b shRNA (m) Lentiviral Particles: sc-141326-V.

Molecular Weight of Atg9b isoforms: 101/45/37 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.