

# AMBRA1 (Q-15): sc-138096

## BACKGROUND

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. AMBRA1 (activating molecule in BECN1-regulated autophagy protein 1), also known as WDR94 or KIAA1736, is a 1,298 amino acid protein that contains 3 WD-repeats. Localized to cytoplasmic vesicles, AMBRA1 functions to control protein turnover, cell proliferation and cell survival during neuronal development, thereby playing an important role in autophagy and the development of the nervous system. Multiple isoforms of AMBRA1 exist due to alternative splicing events.

## REFERENCES

1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XIX. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 347-355.
2. Li, D. and Roberts, R. 2001. WD-repeat proteins: structure characteristics, biological function, and their involvement in human diseases. Cell. Mol. Life Sci. 58: 2085-2097.
3. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611359. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Cecconi, F., et al. 2007. A novel role for autophagy in neurodevelopment. Autophagy 3: 506-508.

## CHROMOSOMAL LOCATION

Genetic locus: AMBRA1 (human) mapping to 11p11.2; Ambra1 (mouse) mapping to 2 E1.

## SOURCE

AMBRA1 (Q-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of AMBRA1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138096 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

AMBRA1 (Q-15) is recommended for detection of AMBRA1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AMBRA1 (Q-15) is also recommended for detection of AMBRA1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for AMBRA1 siRNA (h): sc-96257, AMBRA1 siRNA (m): sc-141039, AMBRA1 shRNA Plasmid (h): sc-96257-SH, AMBRA1 shRNA Plasmid (m): sc-141039-SH, AMBRA1 shRNA (h) Lentiviral Particles: sc-96257-V and AMBRA1 shRNA (m) Lentiviral Particles: sc-141039-V.

Molecular Weight of AMBRA1: 130 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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