

# AMBRA1 (N-18): sc-130116

## 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 three 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<sup>™</sup>. 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.
5. Le Bot, N. 2007. Autophagy: a new regulator of development. Nat. Cell Biol. 9: 741.
6. Fimia, G.M., et al. 2007. AMBRA1 regulates autophagy and development of the nervous system. Nature 447: 1121-1125.
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## CHROMOSOMAL LOCATION

Genetic locus: AMBRA1 (human) mapping to 11p11.2.

## SOURCE

AMBRA1 (N-18) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of AMBRA1 of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

AMBRA1 (N-18) is recommended for detection of AMBRA1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 AMBRA1 siRNA (h): sc-96257, AMBRA1 shRNA Plasmid (h): sc-96257-SH and AMBRA1 shRNA (h) Lentiviral Particles: sc-96257-V.

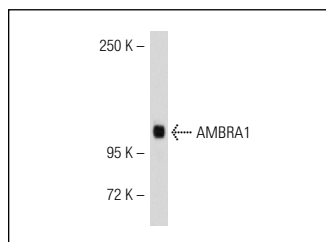
Molecular Weight of AMBRA1: 130 kDa.

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

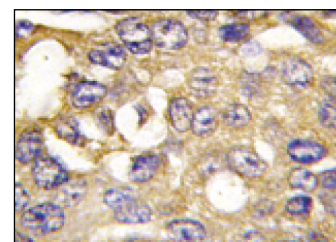
## RECOMMENDED SECONDARY REAGENTS

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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



AMBRA1 (N-18): sc-130116. Western blot analysis of AMBRA1 expression in Hep G2 whole cell lysate.



AMBRA1 (N-18): sc-130116. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining.

## RESEARCH USE

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

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Try **AMBRA1 (G-6): sc-398204**, our highly recommended monoclonal alternative to AMBRA1 (N-18).