SANTA CRUZ BIOTECHNOLOGY, INC.

BECN1 (H-300): sc-11427

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

BECN1 (Beclin 1) is a coiled-coil protein that has been implicated as an inhibitor of tumorigenesis. BECN1, which associates with Bcl-2, plays a significant role in autophagy. Autophagy is the degradation of cellular proteins in the lysosomes, and when this pathway is suppressed, cell growth is deregulated. Autophagy is controlled by the same signal transduction pathway that induces the phosphorylation of the ribosomal protein S6, and both are mediated via amino acids. BECN1 expression in various carcinoma cell lines, such as MCF7, is low, whereas it is ubiquitously expressed in normal breast tissue. In transfected MCF7 cells, BECN1 complements autophagocytosis and, subsequently, inhibits cellular proliferation. Additionally, BECN1 shares structural similarity to the yeast autophagy gene product, Apg6, and was one of the first mammalian proteins discovered to mediate autophagy.

CHROMOSOMAL LOCATION

Genetic locus: BECN1 (human) mapping to 17q21.31; Becn1 (mouse) mapping to 11 D.

SOURCE

BECN1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of BECN1 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.

APPLICATIONS

BECN1 (H-300) is recommended for detection of BECN1 of mouse, rat and 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

BECN1 (H-300) is also recommended for detection of BECN1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BECN1 siRNA (h): sc-29797, BECN1 siRNA (m): sc-29798, BECN1 shRNA Plasmid (h): sc-29797-SH, BECN1 shRNA Plasmid (m): sc-29798-SH, BECN1 shRNA (h) Lentiviral Particles: sc-29797-V and BECN1 shRNA (m) Lentiviral Particles: sc-29798-V.

Molecular Weight of BECN1: 60 kDa.

Positive Controls: BECN1 (m): 293T Lysate: sc-125053, MCF7 whole cell lysate: sc-2206 or NIH/3T3 whole cell lysate: sc-2210.

RESEARCH USE

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

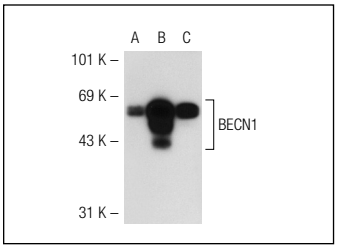
PROTOCOLS

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

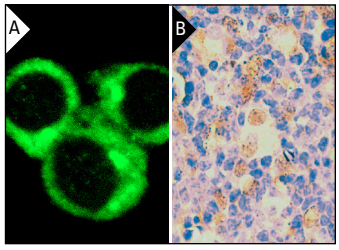
STORAGE

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

DATA



BECN1 (H-300): sc-11427. Western blot analysis of BECN1 expression in non-transfected 293T: sc-117752 (**A**), mouse BECN1 transfected 293T: sc-125053 (**B**) and MCF7 (**C**) whole cell lysates.



BECN1 (H-300): sc-11427. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse prostate tissue showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Shibata, M., et al. 2006. Regulation of intracellular accumulation of mutant Huntingtin by Beclin 1. J. Biol. Chem. 281: 14474-14485.
2. Li, C., et al. 2006. Autophagy is induced in CD4+ T cells and important for the growth factor-withdrawal cell death. J. Immunol. 177: 5163-5168.
3. Wang, Q.J., et al. 2006. Induction of autophagy in axonal dystrophy and degeneration. J. Neurosci. 26: 8057-8068.
4. Wan, X.B., et al. 2012. Molecular prognostic prediction for locally advanced nasopharyngeal carcinoma by support vector machine integrated approach. PLoS ONE 7: e31989.
5. Hou, H., et al. 2012. Inhibitors of phosphatidylinositol 3'-kinases promote mitotic cell death in HeLa cells. PLoS ONE 7: e35665.
6. Kotelevets, N., et al. 2012. Targeting sphingosine kinase 1 in carcinoma cells decreases proliferation and survival by compromising PKC activity and cytokinesis. PLoS ONE 7: e39209.
7. Chang, N.C., et al. 2012. Bcl-2-associated autophagy regulator Naf-1 required for maintenance of skeletal muscle. Hum. Mol. Genet. 21: 2277-2287.
8. Inomata, M., et al. 2012. Regulation of Toll-like receptor signaling by NDP52-mediated selective autophagy is normally inactivated by A20. Cell. Mol. Life Sci. 69: 963-979.
9. Bravo-San Pedro, J.M., et al. 2012. The LRRK2 G2019S mutant exacerbates basal autophagy through activation of the MEK/ERK pathway. Cell. Mol. Life Sci. 70: 121-136.

MONOS Satisfaction Guaranteed

Try **BECN1 (E-8): sc-48341** or **BECN1 (G-11): sc-48381**, our highly recommended monoclonal alternatives to BECN1 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **BECN1 (E-8): sc-48341**.