SANTA CRUZ BIOTECHNOLOGY, INC.

BECN1 (m): 293T Lysate: sc-125053

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.

REFERENCES

1. Kisen, G.O., et al. 1993. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. Carcinogenesis 14: 2501-2505.
2. Bloomaart, E.F., et al. 1995. Phosphorylation of Ribosomal Protein S6 is inhibitory for autophagy in isolated rat hepatocytes. J. Biol. Chem. 270: 2320-2326.
3. Blommaart, E.F., et al. 1997. Autophagic proteolysis: control and specificity. Histochem. J. 29: 365-385.
4. Liang, X.H., et al. 1998. Protection against fatal Sindbis virus encephalitis by beclin, a novel Bcl-2 interacting protein. J. Virol. 72: 8586-8596.
5. Liang, X.H., et al. 1999. Induction of autophagy and inhibition of tumorigenesis of beclin 1. Nature 402: 672-676.

CHROMOSOMAL LOCATION

Gentic locus: Becn1 (mouse) mapping to 11 D.

PRODUCT

BECN1 (m): 293T Lysate represents a lysate of mouse BECN1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

BECN1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive BECN1 antibodies.Recommended use: 10-20 µl per lane.

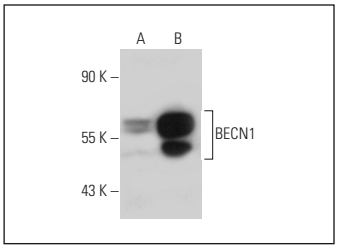
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

BECN1 (G-11): sc-48381 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse BECN1 expression in BECN1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



BECN1 (G-11): sc-48381. Western blot analysis of BECN1 expression in non-transfected: sc-117752 (**A**) and mouse BECN1 transfected: sc-125053 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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