

Beclin 1 (G-11): sc-48381

BACKGROUND

Beclin 1 (BECN1) is a coiled-coil protein that has been implicated as an inhibitor of tumorigenesis. Beclin 1, 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. Beclin 1 expression in various carcinoma cell lines such as MCF7 is low, whereas it is ubiquitously expressed in normal breast tissue. In transfected MCF7 cells, Beclin 1 complements autophagocytosis and, subsequently, inhibits cellular proliferation. Additionally, Beclin 1 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

Beclin 1 (G-11) is a mouse monoclonal antibody raised against amino acids 1-300 of Beclin 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Beclin 1 (G-11) is available conjugated to agarose (sc-48381 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48381 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48381 PE), fluorescein (sc-48381 FITC), Alexa Fluor[®] 488 (sc-48381 AF488), Alexa Fluor[®] 546 (sc-48381 AF546), Alexa Fluor[®] 594 (sc-48381 AF594) or Alexa Fluor[®] 647 (sc-48381 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-48381 AF680) or Alexa Fluor[®] 790 (sc-48381 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Beclin 1 (G-11) is recommended for detection of Beclin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 Beclin 1 siRNA (h): sc-29797, Beclin 1 siRNA (m): sc-29798, Beclin 1 shRNA Plasmid (h): sc-29797-SH, Beclin 1 shRNA Plasmid (m): sc-29798-SH, Beclin 1 shRNA (h) Lentiviral Particles: sc-29797-V and Beclin 1 shRNA (m) Lentiviral Particles: sc-29798-V.

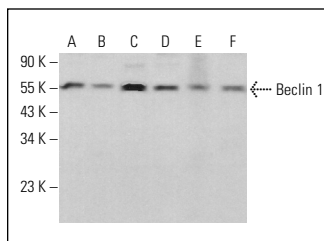
Molecular Weight of Beclin 1: 60 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, A-431 whole cell lysate: sc-2201 or Raji whole cell lysate: sc-364236.

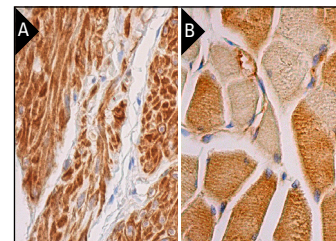
STORAGE

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

DATA



Beclin 1 (G-11): sc-48381. Western blot analysis of Beclin 1 expression in K-562 (A), A-431 (B), Raji (C), Jurkat (D), HEL 92.1.7 (E) and RAW 264.7 (F) whole cell lysates.



Beclin 1 (G-11): sc-48381. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

- Colosetti, P., et al. 2009. Autophagy is an important event for megakaryocytic differentiation of the chronic myelogenous leukemia K-562 cell line. *Autophagy* 5: 1092-1098.
- Xiong, Y., et al. 2014. ARG2 impairs endothelial autophagy through regulation of MTOR and PRKAA/AMPK signaling in advanced atherosclerosis. *Autophagy* 10: 2223-2238.
- Wang, L., et al. 2015. Decreased autophagy: a major factor for cardiomyocyte death induced by β 1-adrenoceptor autoantibodies. *Cell Death Dis.* 6: e1862.
- Huang, Q., et al. 2016. Apelin-13 induces autophagy in hepatoma Hep G2 cells through ERK1/2 signaling pathway-dependent upregulation of Beclin1. *Oncol. Lett.* 11: 1051-1056.
- Chen, C., et al. 2017. Mir30c is involved in diabetic cardiomyopathy through regulation of cardiac autophagy via BECN1. *Mol. Ther. Nucleic Acids.* 7: 127-139.
- Hathaway-Schrader, J.D., et al. 2018. Autophagy-dependent crosstalk between GILT and PAX-3 influences radiation sensitivity of human melanoma cells. *J. Cell. Biochem.* 119: 2212-2221.
- Li, J., et al. 2019. The expression of Bcl-2 in adenomyosis and its effect on proliferation, migration, and apoptosis of endometrial stromal cells. *Pathol. Res. Pract.* 215: 152477.
- Scherr, A.L., et al. 2020. Knockdown of Atg7 induces nuclear-LC3 dependent apoptosis and augments chemotherapy in colorectal cancer cells. *Int. J. Mol. Sci.* 21: 1099.

RESEARCH USE

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

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