

# BECN1 (K-15): sc-10087

## 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 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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.

Blocking peptide available for competition studies, sc-10087 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.

## APPLICATIONS

BECN1 (K-15) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BECN1 (K-15) 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.

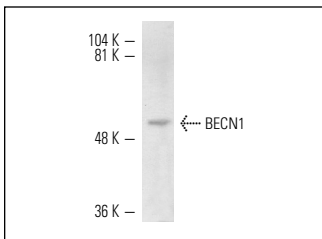
Molecular Weight of BECN1: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or mouse prostate extract: sc-364249.

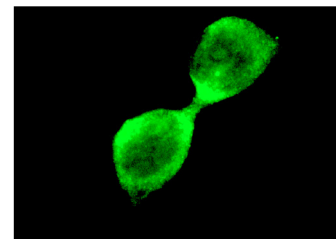
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



BECN1 (K-15): sc-10087. Western blot analysis of BECN1 expression in mouse prostate tissue extract.



BECN1 (K-15): sc-10087. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Gosselin, K., et al. 2009. Senescent keratinocytes die by autophagic programmed cell death. *Am. J. Pathol.* 174: 423-435.
- Dou, Z., et al. 2010. The class IA phosphatidylinositol 3-kinase p110-β subunit is a positive regulator of autophagy. *J. Cell Biol.* 191: 827-843.

## RESEARCH USE

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

## PROTOCOLS

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



Try **BECN1 (E-8): sc-48341** or **BECN1 (G-11): sc-48381**, our highly recommended monoclonal alternatives to BECN1 (K-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **BECN1 (E-8): sc-48341**.