

BECN1

Reactivity: Human Mouse Rat

Tested applications: WB IHC IF IP

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:100 IF 1:50 - 1:200 IP 1:20 - 1:50

Calculated MW: 52kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant Protein of human BECN1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

BECN1;ATG6;VPS30;beclin1;

Catalog #: A0562

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 8678

Isotype: IgG

Swiss Prot: Q14457

Purity: Affinity purification

For research use only.

Background:

Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of proteins activated in response to nutrient deprivation and in neurodegenerative conditions (1). One of the proteins critical to this process is Beclin-1, the mammalian orthologue of the yeast autophagy protein Apg6/Vps30 (2). Beclin-1 can complement defects in yeast autophagy caused by loss of Apg6 and can also stimulate autophagy when overexpressed in mammalian cells (3). Mammalian Beclin-1 was originally isolated in a yeast two-hybrid screen for Bcl-2 interacting proteins and has been shown to interact with Bcl-2 and Bcl-xL but not with Bax or Bak (4). While Beclin-1 is generally ubiquitously expressed, it is monoallelically deleted in 40-75% of sporadic human breast and ovarian cancers (5). It is localized within cytoplasmic structures including the mitochondria, although overexpression of Beclin-1 reveals some nuclear staining and CRM1-dependent nuclear export (6). Beclin-1 $-/-$ mice die early in embryogenesis and Beclin-1 $-/+$ mice have a high incidence of spontaneous tumors. Stem cells from the null mice demonstrate an altered autophagic response although responses to apoptosis appeared normal (7). Overexpression of Beclin-1 in virally infected neurons in vivo resulted in significant protection against Sindbis virus-induced disease and neuronal apoptosis (4).

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