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Beclin-1 Antibody

Catalog # ASC10359

Product Information

Application	WB, E, IHC-P
Primary Accession	Q14457
Other Accession	AAH10276, 16307457
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	51896
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Beclin-1 antibody can be used for the detection of Beclin-1 by Western blot at 0.5 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2 g/mL.

Additional Information

Gene ID	8678
Other Names	Beclin-1 Antibody: ATG6, VPS30, beclin1, GT197, Beclin-1, Coiled-coil myosin-like BCL2-interacting protein, beclin 1, autophagy related
Target/Specificity	BECN1;
Reconstitution & Storage	Beclin-1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Beclin-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BECN1
Synonyms	GT197
Function	Plays a central role in autophagy (PubMed: 18570871, PubMed:21358617, PubMed:23184933, PubMed:23974797, PubMed:25484083, PubMed:28445460, PubMed:37776275). Acts as a core subunit of the PI3K complex that mediates formation of phosphatidylinositol 3-phosphate; different complex forms are believed to play a role in multiple membrane trafficking pathways: PI3KC3-C1 is involved in initiation of autophagosomes and PI3KC3-C2 in maturation of autophagosomes and endocytosis. Involved

	in regulation of degradative endocytic trafficking and required for the abscission step in cytokinesis, probably in the context of PI3KC3-C2 (PubMed:20208530, PubMed:20643123, PubMed:23974797, PubMed:26783301). Essential for the formation of PI3KC3-C2 but not PI3KC3-C1 PI3K complex forms. Involved in endocytosis (PubMed:25275521). May play a role in antiviral host defense.
Cellular Location	Cytoplasm. Golgi apparatus, trans-Golgi network membrane; Peripheral membrane protein. Endosome membrane; Peripheral membrane protein. Endoplasmic reticulum membrane; Peripheral membrane protein. Mitochondrion membrane; Peripheral membrane protein. Endosome {ECO:0000250|UniProtKB:O88597} Cytoplasmic vesicle, autophagosome. Note=Interaction with ATG14 promotes translocation to autophagosomes. Expressed in dendrites and cell bodies of cerebellar Purkinje cells (By similarity) {ECO:0000250|UniProtKB:O88597, ECO:0000269|PubMed:19050071} [Beclin-1-C 37 kDa]: Mitochondrion {ECO:0000250|UniProtKB:O88597}
Tissue Location	Ubiquitous.

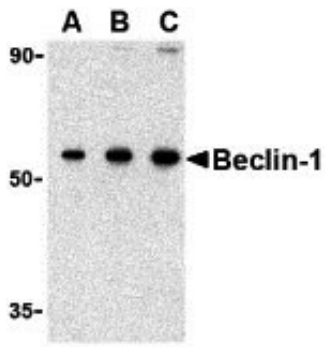
Background

Beclin-1 Antibody: Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. Beclin-1, a coiled-coil Bcl-2-interacting protein homologous to the yeast autophagy gene apg6, is a mammalian autophagy gene that can inhibit tumorigenesis and is expressed at reduced levels in human breast carcinoma, suggesting that defects in autophagy proteins may contribute to the development or progression of tumors. Bcl-2 can bind to Beclin-1 and inhibit Beclin-1-dependent autophagy in yeast and mammalian cells, suggesting that Bcl-2 functions as an anti-autophagy protein as well as an anti-apoptotic protein, which helps maintain autophagy at levels that are more compatible with cell survival rather than cell death.

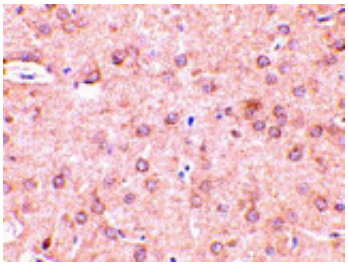
References

Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. Oncogene. 2004; 23:2891-906.
Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. Carcinogenesis 1993; 14:2501-5.
Liang XH, Kleeman LK, Jiang HH, et al. Protection against fatal Sindbis virus encephalitis by Beclin, a novel Bcl-2-interacting protein. J. Virol. 1998; 72:8586-96.
Kametaka S, Okano T, Ohsumi M, et al. Apg14p and Apg6/Vps30p form a protein complex essential for autophagy in the yeast Saccharomyces cerevisiae. J. Biol. Chem. 1998; 273:22284-91.

Images



Western blot analysis of Beclin-1 in 293 cell lysate with Beclin-1 antibody at (A) 0.5, (B) 1 and (C) 2 µg/mL.



Immunohistochemistry of beclin-1 in rat brain tissue with beclin-1 antibody at 2 µg/mL.

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