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AP20054PU-N Polyclonal Antibody to Beclin-1 (N-term) - Aff - Purified

Alternate names: BECN1, Coiled-coil myosin-like BCL2-interacting protein, GT197, Protein GT197

Quantity: 0.1 mg

Background: 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 (1,2). Beclin-1, a coiled-coil Bcl-2-interacting protein homologous to the yeast autophagy gene apg6 (3,4), 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 (5). 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 (6).

Uniprot ID: Q14457

NCBI: NP_003757

GeneID: 8678

Host / Isotype: Rabbit / IgG

Immunogen: Beclin-1 antibody was raised against a 17 amino acid peptide from near the amino terminus of Human Beclin-1.

Format:
State: Liquid purified IgG fraction
Purification: Immunoaffinity Chromatography
Buffer System: PBS containing 0.02% Sodium Azide as preservative

Applications:
ELISA.
Western blot: Beclin-1 antibody can be used for the detection of Beclin-1 at 0.5–1 µg/ml.
Positive Control: 293 Cell Lysate.
Immunohistochemistry on Paraffin Sections.
Positive Control: Rat Brain Tissue.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:
Recognizes Beclin-1 (N-term).
Species: Human, Mouse and Rat.
Other species not tested.

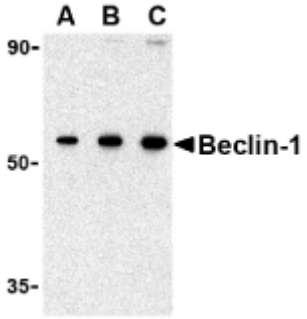
Storage:
Store undiluted at 2-8°C.
Antibodies should not be exposed to prolonged high temperatures.
Shelf life: one year from despatch.

General Readings:
1. Gozuacik D, Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. Oncogene. 2004 Apr 12;23(16):2891-906. PubMed PMID: 15077152.
2. Kisen GO, Tessitore L, Costelli P, Gordon PB, Schwarze PE, Baccino FM, et al.

Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. Carcinogenesis. 1993 Dec;14(12):2501-5. PubMed PMID: 8269618.
3. Liang XH, Kleeman LK, Jiang HH, Gordon G, Goldman JE, Berry G, et al. Protection against fatal Sindbis virus encephalitis by beclin, a novel Bcl-2-interacting protein. J Virol. 1998 Nov;72(11):8586-96. PubMed PMID: 9765397.
4. Kametaka S, Okano T, Ohsumi M, Ohsumi Y. Apg14p and Apg6/Vps30p form a protein complex essential for autophagy in the yeast, Saccharomyces cerevisiae. J Biol Chem. 1998 Aug 28;273(35):22284-91. PubMed PMID: 9712845.
5. Liang XH, Jackson S, Seaman M, et al. Induction of autophagy and inhibition of tumorigenesis by beclin 1. Nature 1999; 402:672-6.
6. Pattingre S, Tassa A, Qu X, Garuti R, Liang XH, Mizushima N, et al. Bcl-2 antiapoptotic proteins inhibit Beclin 1-dependent autophagy. Cell. 2005 Sep 23;122(6):927-39. PubMed PMID: 16179260.

Pictures:

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



Immunohistochemistry of beclin-1 in rat brain tissue with beclin-1 antibody at 2 ug/ml.