

**Beclin 1 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1818a**

**Specification**

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**Beclin 1 Antibody - Product Information**

Application	<b>WB, IHC-P,E</b>
Primary Accession	<a href="#">O14457</a>
Other Accession	<a href="#">O5ZKS6</a> , <a href="#">O4A1L4</a>
Reactivity	<b>Human, Mouse</b>
Predicted	<b>Bovine, Chicken</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>Rabbit IgG</b>
Antigen Region	<b>181-210</b>

**Beclin 1 Antibody - Additional Information**

**Gene ID** 8678

**Other Names**

Beclin-1, Coiled-coil myosin-like BCL2-interacting protein, Protein GT197, BECN1, GT197

**Target/Specificity**

This Beclin 1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 181-210 amino acids from human Beclin 1.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Beclin 1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Beclin 1 Antibody - 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

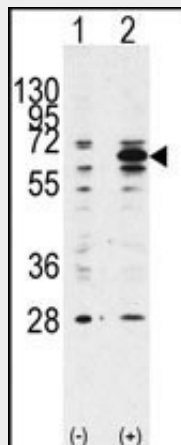
Ubiquitous.

#### Beclin 1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

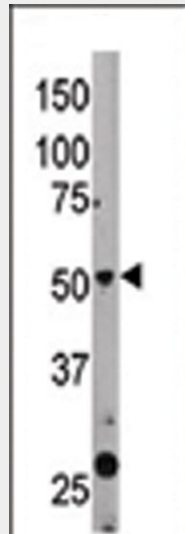
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Beclin 1 Antibody - Images

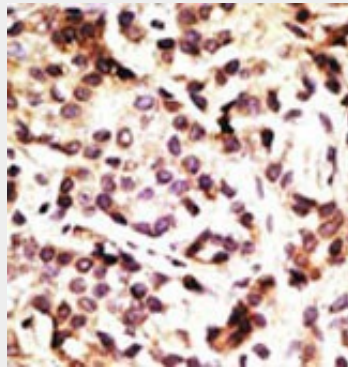


Western blot analysis of anti-hBECN1-Q196 Pab (Cat. #AP1818a) in 293 cell line lysates

transiently transfected with the BECN1 gene (2ug/lane). hBECN1-Q196(arrow) was detected using the purified Pab.



The anti-BECN1 Pab (Cat. #AP1818a) is used in Western blot to detect BECN1 in mouse liver tissue lysate. BECN1(arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

### **Beclin 1 Antibody - Background**

Macroautophagy is the major inducible pathway for the general turnover of cytoplasmic constituents in eukaryotic cells, it is also responsible for the degradation of active cytoplasmic enzymes and organelles during nutrient starvation. Macroautophagy involves the formation of double-membrane bound autophagosomes which enclose the cytoplasmic constituent targeted for degradation in a membrane bound structure, which then fuse with the lysosome (or vacuole) releasing a single-membrane bound autophagic bodies which are then degraded within the lysosome (or vacuole). Beclin 1 plays a role in two fundamentally important cell biological pathways: autophagy and apoptosis. Beclin 1 is thought to function as a VPS and autophagy protein as part of a complex with Class III PI3 kinase, Vps34.

### **Beclin 1 Antibody - References**

Baehrecke EH. *Nat Rev Mol Cell Biol.* 6(6):505-10. (2005) Lum JJ, et al. *Nat Rev Mol Cell Biol.* 6(6):439-48. (2005) Greenberg JT. *Dev Cell.* 8(6):799-801. (2005) Levine B. *Cell.* 120(2):159-62. (2005) Shintani T and Klionsky DJ. *Science.* 306(5698):990-5. (2004) Liang,X.H., et al. *J. Virol.* 72

(11), 8586-8596 (1998) Aita V.M., et al. Genomics 59:59-65(1999).

**Beclin 1 Antibody - Citations**

- [TLR4-mediated autophagic impairment contributes to neuropathic pain in chronic constriction injury mice.](#)
- [Curcumin induces apoptotic cell death and protective autophagy in human gastric cancer cells.](#)
- [Down-regulation of autophagy-related protein 5 \(ATG5\) contributes to the pathogenesis of early-stage cutaneous melanoma.](#)
- [Expression of LC3 and Beclin 1 in the spinal dorsal horn following spinal nerve ligation-induced neuropathic pain.](#)
- [Chondrocyte autophagy is stimulated by HIF-1 dependent AMPK activation and mTOR suppression.](#)
- [Triterpenes from Ganoderma Lucidum induce autophagy in colon cancer through the inhibition of p38 mitogen-activated kinase \(p38 MAPK\).](#)