

## Rabbit Beclin 1 Polyclonal Antibody | anti-BECN1 antibody

Phospho-Beclin 1 (Ser295) Antibody

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                                                         |
|-----------|--------|-------------------|----------------------------------------------------------------------|
| AAA329250 | Rabbit | Human, Mouse, Rat | ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry |

### PRODUCT SYNONYMS

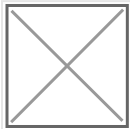
Beclin 1; Polyclonal Antibody; Phospho-Beclin 1 (Ser295) Antibody; APG6; ATG 6; ATG6; ATG6 autophagy related 6 homolog; Bcl-2-interacting protein beclin; Beclin 1 (coiled coil moesin like BCL2 interacting protein); Beclin 1 autophagy related; Beclin-1; Beclin1; BECN 1; Becn1; BECN1\_HUMAN; Coiled coil myosin like BCL2 interacting protein; Coiled-coil myosin-like BCL2-interacting protein; GT197; Protein GT197; VPS 30; VPS30; anti-BECN1 antibody

### PRODUCT SPECIFICATIONS

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                            | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Reactivity                                      | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Clonality                                       | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Isotype                                         | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specificity                                     | Phospho-Beclin 1 (Ser295) Antibody detects endogenous levels of Beclin 1 only when phosphorylated at Ser295. Tissue Specificity: Ubiquitous.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Purity/Purification                             | The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Form/Format                                     | Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Concentration                                   | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Applicable Applications for anti-BECN1 antibody | ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Immunogen                                       | A synthesized peptide derived from human Beclin 1 around the phosphorylation site of Ser295.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Conjugation                                     | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Fragment                                        | Fab fragment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Post Translational Modifications                | Phosphorylation at Thr-119 by DAPK1 reduces its interaction with BCL2 and BCL2L1 and promotes induction of autophagy. In response to autophagic stimuli, phosphorylated at serine residues by AMPK in an ATG14-dependent manner, and this phosphorylation is critical for maximally efficient autophagy. Polyubiquitinated by NEDD4, both with 'Lys-11'- and 'Lys-63'-linkages. 'Lys-11'-linked polyubiquitination leads to degradation and is enhanced when the stabilizing interaction partner VPS34 is depleted. Deubiquitinated by USP10 and USP13, leading to stabilize the PIK3C3/VPS34-containing complexes. Polyubiquitinated at Lys-402 with 'Lys-48'-linkages. 'Lys-48'-linked polyubiquitination of Lys-402 leads to degradation. Deubiquitinated by ATXN3, leading to stabilization. Proteolytically processed by caspases including CASP8 and CASP3; the C-terminal fragments lack autophagy-inducing capacity and are proposed to induce apoptosis. Thus the cleavage is proposed to be an determinant to switch from autophagy to apoptosis pathways affecting cellular homeostasis including viral infections and survival of tumor cells. |

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|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subunit Structure</b>       | <p>A homodimeric form is proposed to exist; this metastable form readily transits to ATG14- or UVRAG-containing complexes with BECN1:UVRAG being more stable than BECN1:ATG14 (By similarity). Component of the PI3K (PI3KC3/PI3K-III/class III phosphatidylinositol 3-kinase) complex the core of which is composed of the catalytic subunit PIK3C3, the regulatory subunit PIK3R4 and BECN1 associating with additional regulatory/auxiliary subunits to form alternative complex forms. Alternative complex forms containing a forth regulatory subunit in a mutually exclusive manner are PI3K complex I (PI3KC3-C1) containing ATG14, and PI3K complex II (PI3KC3-C2) containing UVRAG. PI3KC3-C1 displays a V-shaped architecture with PIK3R4 serving as a bridge between PIK3C3 and the ATG14:BECN1 subcomplex. Both, PI3KC3-C1 and PI3KC3-C2, can associate with further regulatory subunits, such as RUBCN, SH3GLB1/Bif-1 and AMBRA1. PI3KC3-C1 probably associates with PIK3CB (By similarity). Interacts with AMBRA1, GOPC, GRID2 (By similarity). Interacts with BCL2 and BCL2L1 isoform Bcl-X (L); the interaction inhibits BECN1 function in promoting autophagy by interfering with the formation of the PI3K complex. Interacts with cytosolic HMGB1; inhibits the interaction of BECN1 and BCL2 leading to promotion of autophagy. Interacts with USP10, USP13, VMP1, DAPK1, RAB39A. Interacts with the poly-Gln domain of ATXN3; the interaction causes deubiquitination at Lys-402 and stabilizes BECN1. Interacts with SLAMF1. Interacts with TRIM5; the interaction causes activation of BECN1 by causing its dissociation from its inhibitors BCL2 and TAB2. Interacts with active ULK1 (phosphorylated on 'Ser-317') and MEFV simultaneously. Interacts with WDR81 and WDR91; negatively regulates the PI3 kinase/PI3K activity associated with endosomal membranes. Interacts with LAPTM4B; competes with EGFR for LAPTM4B binding; regulates EGFR activity. Interacts with TRIM50. Interacts with TRIM16. (Microbial infection) Interacts with human cytomegalovirus/HHV-5 protein TRS1. (Microbial infection) Interacts with murine gammaherpesvirus 68 M11. (Microbial infection) Interacts with herpes simplex virus 1 (HHV-1) protein ICP34.5; this interaction antagonizes the host autophagy response.</p> |
| <b>Similarity</b>              | <p>The coiled coil domain can form antiparallel homodimers and mediates dimerization with the coiled coil domains of ATG14 or UVRAG involved in the formation of PI3K complexes. The C-terminal evolutionary conserved domain (ECD) contains poly-Gln-binding domains such as the ATXN3 poly-Gln motif, consistent with structural docking models revealing two highly scored poly-Gln-binding pockets in the ECD (PubMed:28445460). As some binding is observed with BECN1 lacking the ECD, other domains of BECN1 may also interact with ATXN3 (PubMed:28445460). Belongs to the beclin family.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Subcellular Location</b>    | <p>Cytoplasm. Golgi apparatus&gt;trans-Golgi network membrane&gt;Peripheral membrane protein. Endosome membrane&gt;Peripheral membrane protein. Endoplasmic reticulum membrane&gt;Peripheral membrane protein. Mitochondrion membrane&gt;Peripheral membrane protein. Endosome. Cytoplasmic vesicle&gt;Autophagosome. Note: Interaction with ATG14 promotes translocation to autophagosomes. Expressed in dendrites and cell bodies of cerebellar Purkinje cells (By similarity). Mitochondrion. Nucleus. Cytoplasm. Mitochondrion.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Preparation and Storage</b> | <p>Store at -20 degree C. Stable for 12 months from date of receipt.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## IMAGES



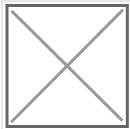
### Application Data

At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody. The nuclear counter stain is DAPI (blue).



### IHC (Immunohistochemistry)

Staining Human kidney cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



### IHC (Immunohistochemistry)

At 1/100 staining Human esophageal cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



### IHC (Immunohistochemistry)

At 1/100 staining Human kidney cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-BECN1 antibody | Plays a central role in autophagy. Acts as 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. Essential for the formation of PI3KC3-C2 but not PI3KC3-C1 PI3K complex forms. Involved in endocytosis. Protects against infection by a neurovirulent strain of Sindbis virus. May play a role in antiviral host defense.Beclin-1-C 35kDa localized to mitochondria can promote apoptosis; it induces the mitochondrial translocation of BAX and the release of proapoptotic factors. |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 4680381                                                                                                                                                                                                                  |
| NCBI GeneID                      | 8678                                                                                                                                                                                                                     |
| UniProt Accession #              | Q14457; O75595; Q9UNA8                                                                                                                                                                                                   |
| Molecular Weight                 | 51,896 Da                                                                                                                                                                                                                |
| NCBI Official Full Name          | beclin 1                                                                                                                                                                                                                 |
| NCBI Official Synonym Full Names | beclin 1, autophagy related                                                                                                                                                                                              |
| NCBI Official Symbol             | BECN1                                                                                                                                                                                                                    |
| NCBI Official Synonym Symbols    | ATG6; VPS30; beclin1                                                                                                                                                                                                     |
| NCBI Protein Information         | beclin-1; ATG6 autophagy related 6 homolog; coiled-coil myosin-like BCL2-interacting protein; beclin 1 (coiled-coil, moesin-like BCL2 interacting protein); beclin 1 (coiled-coil, moesin-like BCL2-interacting protein) |
| UniProt Protein Name             | Beclin-1                                                                                                                                                                                                                 |
| UniProt Gene Name                | BECN1                                                                                                                                                                                                                    |
| UniProt Synonym Gene Names       | GT197                                                                                                                                                                                                                    |
| UniProt Entry Name               | BECN1_HUMAN                                                                                                                                                                                                              |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/beclin-1-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-elisa/329250>