

Rabbit Beclin-1 Polyclonal Antibody | anti-BECN1 antibody

Phospho-Beclin-1 (Ser279) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA328513	Rabbit	Human, Mouse, Rat Predicted: Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Beclin-1; Polyclonal Antibody; Phospho-Beclin-1 (Ser279) 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; Beclin1; 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

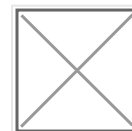
Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted: Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-Beclin-1 (Ser279) Antibody detects endogenous levels of Beclin-1 only when phosphorylated at Ser279.
Purity/Purification	Purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid; Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	450
Applicable Applications for anti-BECN1 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Beclin-1 around the phosphorylation site of Ser279.
Tissue Specificity	Ubiquitous.
Subcellular Location	Endosome; Endoplasmic Reticulum; Mitochondrion; Golgi Apparatus; Nucleus; Mitochondrion; Mitochondrion
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



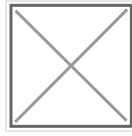
WB (Western Blot)

Western blot analysis of Phospho-Beclin-1 (Ser279) in lysates of 293T⁺, using Phospho-Beclin-1 (Ser279) Antibody.



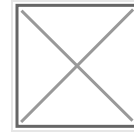
IHC (Immunohistochemistry)

At 1/100 staining rat lung tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary



IHC (Immunohistochemistry)

At 1/100 staining rat heart tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary



IHC (Immunohistochemistry)

At 1/100 staining mouse heart tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary

ADDITIONAL INFORMATION

Related Product Information for anti-BECN1 antibody	Description: Plays a central role in autophagy (PubMed:23184933, PubMed:28445460). 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 (PubMed:20643123, PubMed:20208530, PubMed:26783301). Essential for the formation of PI3KC3-C2 but not PI3KC3-C1 PI3K complex forms. Involved in endocytosis (PubMed:25275521). Protects against infection by a neurovirulent strain of Sindbis virus (PubMed:9765397). May play a role in antiviral host defense. Post Translational Modifications: Phosphorylation at Thr-119 by DAPK1 reduces its interaction with BCL2 and BCL2L1 and promotes induction of autophagy (PubMed:19180116). 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 (PubMed:23878393). Polyubiquitinated by NEDD4, both with 'Lys-11'- and 'Lys-63'-linkages (PubMed:21936852). 'Lys-11'-linked polyubiquitination leads to degradation and is enhanced when the stabilizing interaction partner VPS34 is depleted (PubMed:21936852). Deubiquitinated by USP10 and USP13, leading to stabilize the PI3KC3/VPS34-containing complexes (PubMed:21962518). Polyubiquitinated at Lys-402 with 'Lys-48'-linkages (PubMed:28445460). 'Lys-48'-linked polyubiquitination of Lys-402 leads to degradation (PubMed:28445460). Deubiquitinated by ATXN3, leading to stabilization (PubMed:28445460). 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 a determinant to switch from autophagy to apoptosis pathways affecting cellular homeostasis including viral infections and survival of tumor cells. Subunit Structure: 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/auxilliary 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 (PubMed:18843052, PubMed:19050071, PubMed:19270696, PubMed:23878393, PubMed:25490155). Both, PI3KC3-C1 and PI3KC3-C2, can associate with further regulatory subunits, such as RUBCN, SH3GLB1/Bif-1 and AMBRA1 (PubMed:20643123, PubMed:19270696). 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 (PubMed:9765397, PubMed:16179260, PubMed:17446862, PubMed:17337444, PubMed:17659302). Interacts with cytosolic HMGB1; inhibits the interaction of BECN1 and BCL2 leading to promotion of autophagy (PubMed:20819940). Interacts with USP10, USP13, VMP1, DAPK1, RAB39A (PubMed:19180116, PubMed:17724469, PubMed:17337444, PubMed:21962518, PubMed:24349490). Interacts with the poly-Gln domain of ATXN3; the interaction causes deubiquitination at Lys-402 and stabilizes BECN1 (PubMed:28445460). Interacts with SLAMF1 (PubMed:22493499). Interacts with TRIM5; the interaction causes activation of BECN1 by causing its dissociation from its inhibitors BCL2 and TAB2 (PubMed:25127057). Interacts with active ULK1 (phosphorylated on 'Ser-317') and MEFV simultaneously (PubMed:26347139). Interacts with human cytomegalovirus/HHV-5 protein TRS1 (PubMed:22205736). Interacts with murine gammaherpesvirus 68 M11 (PubMed:18797192, PubMed:24443581). Interacts with WDR81 and WDR91; negatively regulates the PI3 kinase/PI3K activity associated with endosomal membranes (PubMed:26783301). Interacts with LAPTM4B; competes with EGFR for LAPTM4B binding; regulates EGFR activity (PubMed:28479384). Similarity: 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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4680381
NCBI GeneID	8678

UniProt Accession #	Q14457
Molecular Weight	Observed: 60 kDa Predicted: 52 kDa
NCBI Official Full Name	beclin 1
NCBI Official Synonym Full Names	beclin 1
NCBI Official Symbol	BECN1
NCBI Official Synonym Symbols	ATG6; VPS30; beclin1
NCBI Protein Information	beclin-1
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-immunohistochemistry-western-blot-elisa/328513>