

## **Beclin 1 Antibody (Ascites)**

Mouse Monoclonal Antibody (Mab)
Catalog # AM1818a

## **Specification**

# **Beclin 1 Antibody (Ascites) - Product Information**

Application IHC-P, WB, IF,E
Primary Accession Q14457
Reactivity Human
Host Mouse
Clonality Monoclonal
Isotype IgG3\(\chi\)

## **Beclin 1 Antibody (Ascites) - 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 was raised using purified His-tagged recombinant full length human Autophagy BECN1.

#### **Dilution**

IHC-P~~1:50~1:200 WB~~1:50~2000 IF~~1:100

E~~Use at an assay dependent concentration.

#### **Format**

Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

## **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 (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

## **Beclin 1 Antibody (Ascites) - 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}

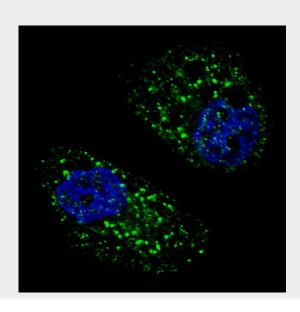
Tissue Location Ubiquitous.

## Beclin 1 Antibody (Ascites) - Protocols

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

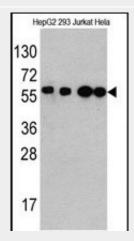
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## **Beclin 1 Antibody (Ascites) - Images**

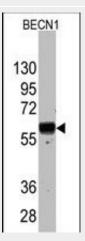




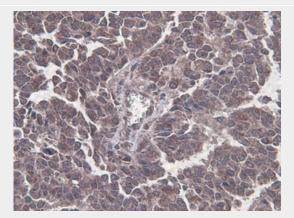
Fluorescent image of U251 cells stained with AM1818a Beclin1 antibody.U251 cells were treated with Chloroquine (50  $\mu$ M,16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AM1818a Beclin1 primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10  $\mu$ g/ml, 5 min). Beclin1 immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells.



Western blot analysis of anti-BECN1 Mab (Cat. #AM1818a) in HepG2, 293, Jurkat and Hela cell line lysates (35µg/lane). BECN1 (arrow) was detected using the Mab ascites (1:2000 dilution).



Western blot analysis of anti-BECN1 Mab (Cat. #AM1818a) in recombinant BECN1 protein. BECN1(arrow) was detected using the ascites Mab (1:2000 dilution).



Breast CA section stained with Autophagy Beclin 1 Antibody (Cat. # AM1818a) at a 1:50 dilution.



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Data courtesy of Dr. Anita Thyagarajan, Cancer Research Laboratory, Methodist Research Institute, Indianapolis, Indiana.

## Beclin 1 Antibody (Ascites) - Background

Beclin-1 participates in the regulation of autophagy and has an important role in development, tumorigenesis, and neurodegeneration (Zhong et al., 2009 [PubMed 19270693]).

# Beclin 1 Antibody (Ascites) - References

## References for protein:

- 1.Age at onset in Huntington's disease is modified by the autophagy pathway: implication of the V471A polymorphism in Atg7. Metzger S, et al. Hum Genet, 2010 Oct. PMID 20697744.
- 2.Interaction of Beclin 1 with survivin regulates sensitivity of human glioma cells to TRAIL-induced apoptosis. Niu TK, et al. FEBS Lett, 2010 Aug 20. PMID 20638385.
- 3. Regulation of amyloid precursor protein processing by the Beclin 1 complex. Jaeger PA, et al. PLoS One, 2010 Jun 15. PMID 20559548.
- 4.Genetic and epigenetic silencing of the beclin 1 gene in sporadic breast tumors. Li Z, et al. BMC Cancer, 2010 Mar 16. PMID 20230646.
- 5. Over-expression of the Beclin1 gene upregulates chemosensitivity to anti-cancer drugs by enhancing therapy-induced apoptosis in cervix squamous carcinoma CaSki cells. Sun Y, et al. Cancer Lett, 2010 Aug 28. PMID 20207475.

## References for U251 cell line:

- 1. Westermark B.; Pontén J.; Hugosson R. (1973)." Determinants for the establishment of permanent tissue culture lines from human gliomas". Acta Pathol Microbiol Scand A. 81:791-805. [PMID: 4359449].
- 2. Pontén, J., Westermark B. (1978)." Properties of Human Malignant Glioma Cells in Vitro". Medical Biology 56: 184-193.[PMID: 359950].
- 3. Geng Y.; Kohli L.; Klocke B.J.; Roth K.A. (2010). "Chloroguine-induced autophagic vacuole accumulation and cell death in glioma cells is p53 independent". Neuro Oncol. 12(5): 473-481.[ PMID: 204068981.

#### **Beclin 1 Antibody (Ascites) - Citations**

- The interaction of Atg4B and Bcl-2 plays an important role in Cd-induced crosstalk between apoptosis and autophagy through disassociation of Bcl-2-Beclin1 in A549 cells.
- Echovirus 7 entry into polarized caco-2 intestinal epithelial cells involves core components of the autophagy machinery.
- Selective subversion of autophagy complexes facilitates completion of the Brucella intracellular cycle.
- Activation of autophagy in mesenchymal stem cells provides tumor stromal support.
- Immunohistochemical evidence for macroautophagy in neurones and endothelial cells in Alzheimer's disease.