

Beclin 1 Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP13795a

Product Information

Application	WB, IF, E
Primary Accession	Q14457
Other Accession	Q6GP52 , Q91XJ1 , Q4A1L5 , O88597 , Q5ZKS6 , Q4A1L4 , NP_003757.1
Reactivity	Human
Predicted	Bovine, Chicken, Mouse, Pig, Rat, Xenopus
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34164
Calculated MW	51896
Antigen Region	100-123

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 100-123 amino acids from human Beclin 1.
Dilution	WB~~1:1000 IF~~1:100 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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.

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.

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]).[supplied by OMIM].

References

References for protein:

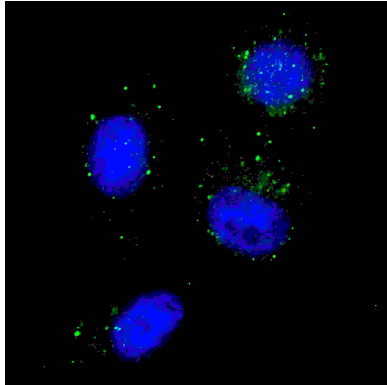
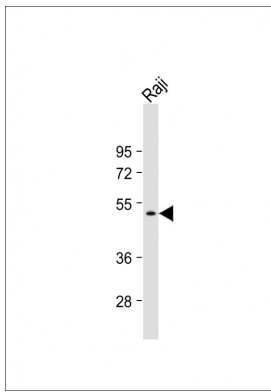
- 1.Koukourakis, M.I., et al. Br. J. Cancer 103(8):1209-1214(2010)
- 2.Jaeger, P.A., et al. Arch. Neurol. 67(10):1181-1184(2010)
3. Metzger, S., et al. Hum. Genet. 128(4):453-459(2010)
- 4.Oberstein, A., et al. J. Biol. Chem. 282(17):13123-13132(2007)
5. Furuya, N., et al. Autophagy 1(1):46-52(2005)

References for U251 cell line:

1. Westermarck 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.,Westermarck 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). “Chloroquine-induced autophagic vacuole accumulation and cell death in glioma cells is p53 independent”. Neuro Oncol. 12(5): 473–481.[PMID: 20406898].

Images

Anti-Beclin 1 Antibody at 1:2000 dilution + Raji whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 52 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Fluorescent image of U251 cells stained with Beclin 1 antibody. U251 cells were treated with Chloroquine (50 μ M, 16h), then fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP13795a Beclin 1 primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 μ g/ml, 5 min). Beclin1 immunoreactivity is localized to autophagic vacuoles in the cytoplasm of U251 cells.

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