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# Anti-Beclin-1 BECN1 Antibody

**Catalog Number:** A00327-1

## About BECN1

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. Beclin-1, a coiled-coil Bcl-2-interacting protein homologous to the yeast autophagy gene apg6, is a mammalian autophagy gene that can inhibit tumorigenesis and is expressed at reduced levels in human breast carcinoma, suggesting that defects in autophagy proteins may contribute to the development or progression of tumors. Bcl-2 can bind to Beclin-1 and inhibit Beclin-1-dependent autophagy in yeast and mammalian cells, suggesting that Bcl-2 functions as an anti-autophagy protein as well as an anti-apoptotic protein, which helps maintain autophagy at levels that are more compatible with cell survival rather than cell death.

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## Overview

| | |
|---|---|
| Product Name | Anti-Beclin-1 BECN1 Antibody |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Beclin-1 BECN1 Antibody (Catalog # A00327-1). Tested in ELISA, WB, ICC/IF, IHC-P, IF applications. This antibody reacts with Human, Mouse, Rat. |
| Application | ELISA, IF, IHC-P, ICC, WB |
| Clonality | Polyclonal |
| Formulation | Beclin-1 Antibody is supplied in PBS containing ≤0.09% sodium azide. |
| Storage Instructions | Beclin-1 antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures. |
| Host | Rabbit |
| Uniprot ID | Q14457 |

## Technical Details

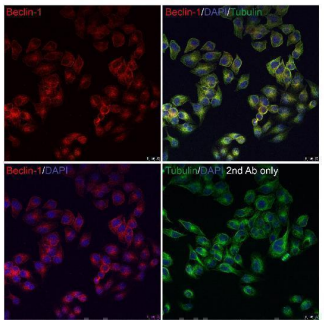
| | |
|---|---|
| Immunogen | Anti-Beclin-1 antibody was raised against a peptide corresponding to 17 amino acids near the center of human Beclin-1. The immunogen is located between 40-90 amino acids of Beclin-1. |
| Predicted Reactive Species | Bovine, Pig |

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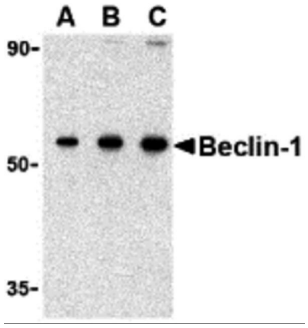
| | |
|---|---|
| Isotype | IgG |
| Form | Liquid |
| Concentration | 1 mg/mL |
| Purification | Beclin-1 Antibody is affinity chromatography purified via peptide column. |
| Suggested Dilutions | WB: 1-2 ug/mL<br>IHC-P: 2-5 ug/mL<br>ICC/IF: 10-20 ug/mL<br>IHC-P/IF: 10-20 ug/mL.<br>Antibody validated: Western Blot in human, mouse and rat samples; Immunohistochemistry in human, mouse, and rat samples; Immunocytochemistry in human samples. All other applications and species not yet tested. |

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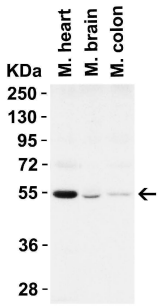
# Anti-Beclin-1 BECN1 Antibody (A00327-1) Images



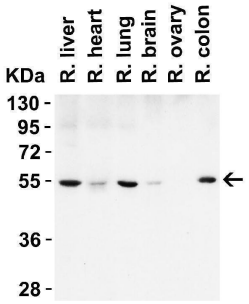

Immunofluorescence Validation of Beclin-1 in HeLa Cells Immunofluorescent analysis of methanol-fixed HeLa cells labeling Beclin-1 with A00327-1 at 10 ug/mL, followed by goat anti-rabbit IgG secondary antibody at 1/1000 dilution (red) and DAPI staining (blue). Alpha tubulin was stained with anti-alpha tubulin antibody following by goat anti-mouse IgG secondary antibody (green). Images were captured with confocal microscopy.




WB Validation in Human Cell Lines Loading: 15 ug of lysate Antibodies: Beclin-1 A00327-1, 1 ug/mL , 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.



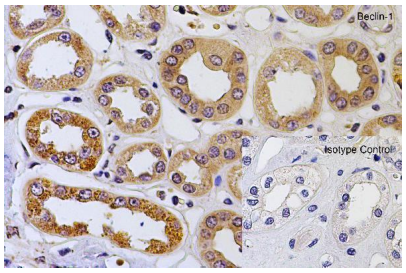

WB Validation in Mouse Tissues Loading: 15 ug of lysate Antibodies: Beclin-1 A00327-1 , 1 u g/mL , 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.



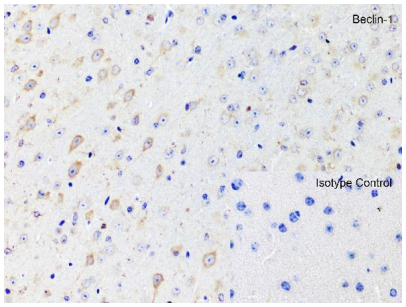

WB Validation in Rat Tissues Loading: 15 ug of lysate Antibodies: Beclin-1 A00327-1, 1 ug/mL , 1 h incubation at RT in 5% NFDM/TBST. Secondary: Goat Anti-Rabbit IgG HRP conjugate at 1:10000 dilution.

Immunohistochemistry Validation of Beclin-1 in Human kidney Tissue Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Beclin-1 antibody (A00327-1) at 2 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A

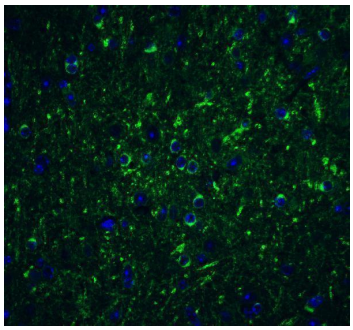
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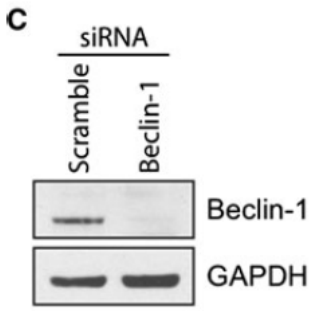

goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



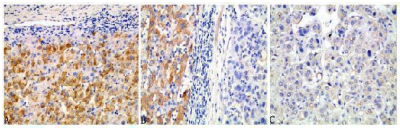

Immunohistochemistry Validation of Beclin-1 in Mouse Brain Tissue Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti-Beclin-1 antibody (A00327-1) at 5 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunofluorescence Validation of Beclin-1 in Mouse Brain Tissue Immunofluorescent analysis of 4% paraformaldehyde-fixed mouse brain labeling Beclin-1 with A00327-1 at 20 ?g/mL, followed by goat anti-rabbit IgG secondary antibody at 1/500 dilution (green) and DAPI antibody (blue).



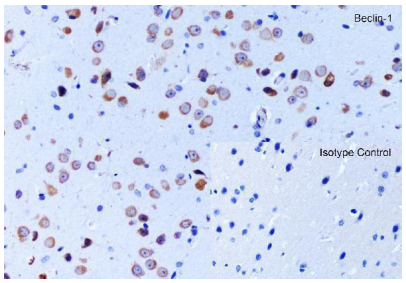

Knockdown of Beclin-1 in Human T47D Cells (Thomas et al., 2011) T47D cells were transfected with scrambled or Beclin-1 siRNA. The following day, these cells were treated with vehicle, C, 0.5 mM VPA, 10 lM 4OH-tamoxifen, T, or 0.5 mM VPA and 10 lM 4OH-tamoxifen, VT, for 48 h and viability was assayed by dye exclusion.



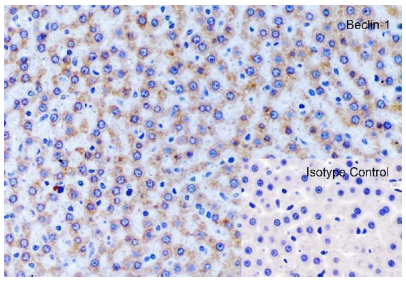
Immunohistochemistry Validation of Beclin-1 in Human HCC Cells (Qiu et al., 2014) Beclin-1 exhibited cytoplasmic staining in adjacent non-tumor (ANT) tissues (A), bordeling site between HCC and ANT (B: left, ANT; right: HCC), and HCC (C), respectively. Beclin-1 expression was stronger in ANT than in HCC. Magnification × 400.

Immunohistochemistry Validation of Beclin-1 in Rat Brain Tissue Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-Beclin-1 antibody (A00327-1) at 2 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were

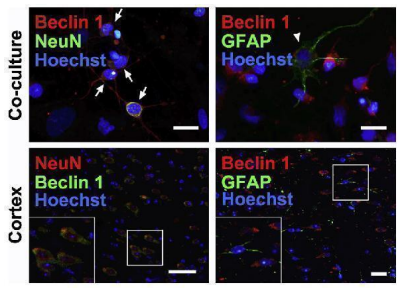
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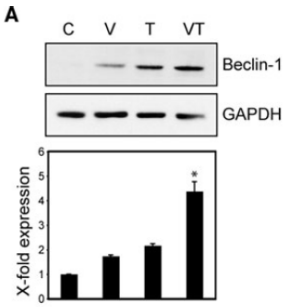

incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.




Immunohistochemistry Validation of Beclin-1 in Rat Liver Tissue Immunohistochemical analysis of paraffin-embedded rat liver tissue using anti-Beclin-1 antibody (A00327-1) at 2 ug/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4˚C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.




Immunofluorescent Validation of Beclin-1 in Human Cortical Neurons and Rat Brain (Wang et al., 2017) Cell specificity of Beclin 1 expression. Cortical neurons and glia co-cultures (upper panels) and cortex slices (lower panels) were immunostained with anti-Beclin 1 (red) and NeuN (neuronal biomarker, green) or GFAP (astrocyte biomarker, green). Neurons and astrocyte in cultured cells were indicated by arrows and arrowhead, respectively. Areas in white boxes were enlarged.




Regulated Expression of Beclin-1 in Human T47D Cells (Thomas et al., 2011) Treatment with tamoxifen and an HDAC inhibitor alters the balance of autophagy and apoptosis inhibitors and drivers. T47D cells were treated with vehicle, C, 0.5 mM VPA, V, 10 lM 4OHtamoxifen, T, or 0.5 mM VPA and 10 lM 4OH-tamoxifen, VT, for 48 h and Beclin-1 protein and RNA

## 2 Publications Citing This Product

1. PubMed ID: 33529908, Ni K,Hua Y.Hydrogen sulfide exacerbated periodontal inflammation and induced autophagy in experimental periodontitis.Int Immunopharmacol.2021 Jan 30;93:107399.doi:10.1016/j.intimp.2021.107399.Epub ahead of print.PMID:33529908.

2. PubMed ID: 31900522, Song L,Yao L,Zhang L,Piao Z,Lu Y.Schizandrol A protects against Abeta1-42-induced autophagy via activation of PI3K/AKT/mTOR pathway in SH-SY5Y cells and primary hippocampal neurons.Naunyn Schmiedebergs Arch Pharmacol.2020 Sep;393(9):1739-1752.doi:10.1007/s00

Visit bosterbio.com/anti-beclin-1-becn1-antibody-a00327-1-boster.html to see all 2 publications.

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