

Anti-Beclin 1 Antibody Picoband™ (monoclonal, 2D12A3)

Catalog Number: M00327-2

About BECN1

Beclin-1, also known as also known as ATG6 or VPS30 is a protein that in humans is encoded by the BECN1 gene. Beclin-1 and its binding partner class III phosphoinositide 3-kinase (PI3K), also named Vps34, are required for the initiation of the formation of the autophagosome in autophagy. This gene participates in the regulation of autophagy and has an important role in development, tumorigenesis, and neurodegeneration. Schizophrenia is associated with low levels of Beclin-1 in the hippocampus of the affected which causes diminished autophagy which in turn results in increased neuronal cell death. It has been found that beclin-1 can promote autophagy in autophagy-defective yeast with a targeted disruption of *apg6/vps30*, and in human MCF7 breast carcinoma cells.

Overview

Product Name	Anti-Beclin 1 Antibody Picoband™ (monoclonal, 2D12A3)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Beclin 1 Antibody Picoband™ (monoclonal, 2D12A3) catalog # M00327-2. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Monoclonal 2D12A3
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Mouse
Uniprot ID	Q14457

Technical Details

Immunogen	E.coli-derived human Beclin 1 recombinant protein (Position: M1-S354). Human Beclin 1 shares 97% amino acid (aa) sequence identity with both mouse and rat Beclin 1.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry, 1-3 ug/1x10⁶ cells, Human

Anti-Beclin 1 Antibody Picoband™ (monoclonal, 2D12A3) (M00327-2) Images

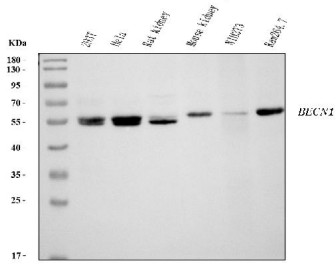


Figure 1. Western blot analysis of Beclin 1 using anti-Beclin 1 antibody (M00327-2).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human 293T whole cell lysates,

Lane 2: human HeLa whole cell lysates,

Lane 3: rat kidney tissue lysates,

Lane 4: mouse kidney tissue lysates,

Lane 5: mouse NIH/3T3 whole cell lysates,

Lane 6: mouse RAW264.7 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes.

Blocked the membrane with 5% non-fat milk/TBS for 1.5

hour at RT. The membrane was incubated with mouse anti-Beclin 1 antigen affinity purified monoclonal antibody

(Catalog # M00327-2) at 0.5 ug/mL overnight at 4°C, then

washed with TBS-0.1%Tween 3 times with 5 minutes each

and probed with a goat anti-mouse IgG-HRP secondary

antibody at a dilution of 1:10000 for 1.5 hour at RT. The

signal is developed using an Enhanced Chemiluminescent

detection (ECL) kit (Catalog # EK1001) with Tanon 5200

system. A specific band was detected for Beclin 1 at

approximately 52-60 kDa. The expected band size for Beclin

1 is at 52 kDa.

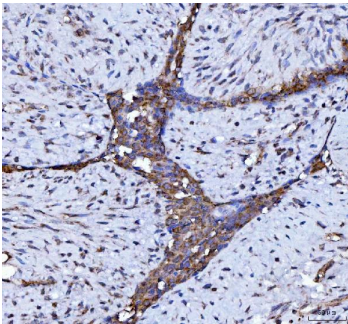


Figure 2. IHC analysis of Beclin 1 using anti-Beclin 1 antibody (M00327-2).

Beclin 1 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval

was performed in EDTA buffer (pH 8.0, epitope retrieval

solution). The tissue section was blocked with 10% goat

serum. The tissue section was then incubated with 2 ug/ml

mouse anti-Beclin 1 Antibody (M00327-2) overnight at 4°C.

Peroxidase Conjugated Goat Anti-mouse IgG was used as

secondary antibody and incubated for 30 minutes at 37°C.

The tissue section was developed using HRP Conjugated

Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with

DAB as the chromogen.

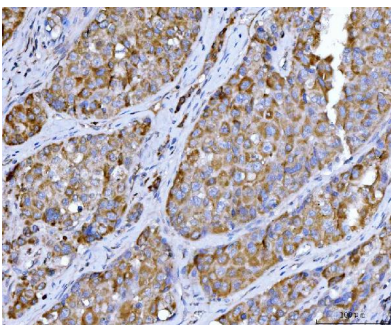


Figure 3. IHC analysis of Beclin 1 using anti-Beclin 1 antibody (M00327-2).

Beclin 1 was detected in a paraffin-embedded section of

human hepatocellular carcinoma tissue. Heat mediated

antigen retrieval was performed in EDTA buffer (pH 8.0,

epitope retrieval solution). The tissue section was blocked

with 10% goat serum. The tissue section was then incubated

with 2 ug/ml mouse anti-Beclin 1 Antibody (M00327-2)

overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse

IgG was used as secondary antibody and incubated for 30

minutes at 37°C. The tissue section was developed using

HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog

SV0001) with DAB as the chromogen.

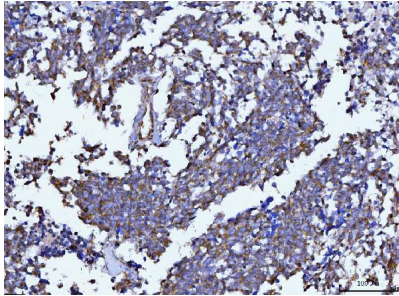


Figure 4. IHC analysis of Beclin 1 using anti-Beclin 1 antibody (M00327-2). Beclin 1 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-Beclin 1 Antibody (M00327-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

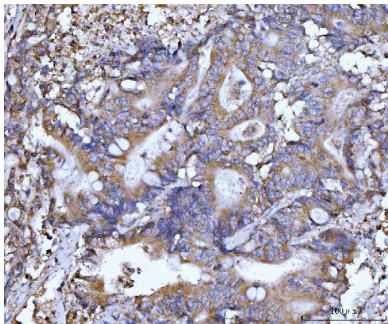


Figure 5. IHC analysis of Beclin 1 using anti-Beclin 1 antibody (M00327-2). Beclin 1 was detected in a paraffin-embedded section of human colonic adenoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-Beclin 1 Antibody (M00327-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

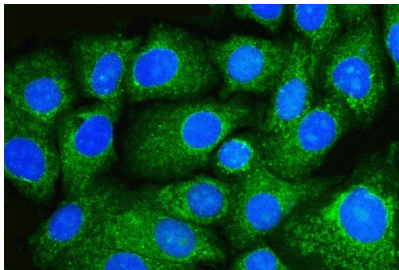


Figure 6. IF analysis of Beclin 1 using anti-Beclin 1 antibody (M00327-2). Beclin 1 was detected in an immunocytochemical section of HepG2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL mouse anti-Beclin 1 Antibody (M00327-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

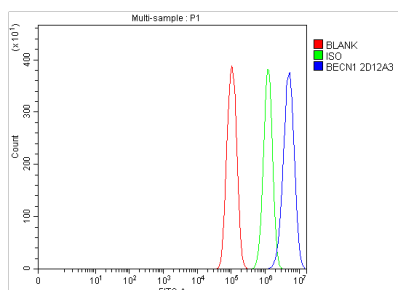


Figure 7. Flow Cytometry analysis of PC-3 cells using anti-Beclin 1 antibody (M00327-2). Overlay histogram showing PC-3 cells stained with M00327-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Beclin 1 Antibody (M00327-2, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

2 Publications Citing This Product

1. PubMed ID: PMID:27293989, Recombinant Newcastle disease virus (rL-RVG) triggers autophagy and apoptosis in gastric carcinoma cells by inducing ER stress
2. PubMed ID: 10.3892/ijo.2015.3039, Autophagy is involved in recombinant Newcastle disease virus (rL-RVG)-induced cell death of stomach adenocarcinoma cells in vitro

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