

Anti-Beclin 1 Antibody [JE59-31] - BSA and Azide free

HA750546



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 52 kDa
Clone number:	JE59-31

Description: Beclin-1 is a protein that in humans is encoded by the BECN1 gene. Beclin-1 is a mammalian ortholog of the yeast autophagy-related gene 6 (Atg6) and BEC-1 in the *C. elegans* nematode. This protein interacts with either BCL-2 or PI3k class III, playing a critical role in the regulation of both autophagy and cell death. Beclin-1 plays an important role in tumorigenesis, and neurodegeneration, being implicated in the autophagic programmed cell death. Ovarian cancer with upregulated autophagy has a less aggressive behavior and is more responsive to chemotherapy. Schizophrenia is associated with low levels of Beclin-1 in the hippocampus of those affected, which causes diminished autophagy which in turn results in increased neuronal cell death. This protein is thought to play a role in multiple cellular processes, including tumorigenesis, neurodegeneration and apoptosis. Alternative splicing results in multiple transcript variants.

Immunogen: Recombinant protein within Human Beclin 1 aa 351-450 / 450.

Positive control: Raji, MG-63 cell lysate, Mouse cerebellum tissue lysate, Rat cerebellum tissue lysate, human cerebellum tissue lysates, NIH/3T3 cell lysate, C6 cell lysate, human colon carcinoma tissue, mouse brain tissue.

Subcellular location: Cytoplasm, Golgi apparatus, trans-Golgi network membrane, Endosome membrane, Endoplasmic reticulum membrane, Mitochondrion membrane, Endosome, Cytoplasmic vesicle, autophagosome.

Database links: SwissProt: Q14457 Human | O88597 Mouse | Q91XJ1 Rat

Recommended Dilutions:

WB	1:500-1:1,000
IHC-P	1:200
IF-Cell	1:250

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Orders: 0086-571-88062880

Technical: 0086-571-89986345

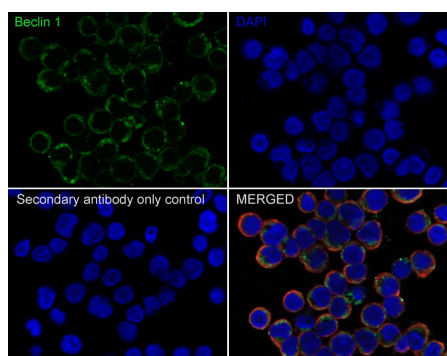
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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Immunocytochemistry analysis of Raji cells labeling Beclin 1 with Rabbit anti-Beclin 1 antibody (HA750546) at 1/250 dilution.



Cells were fixed in 80% precooled methanol for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Beclin 1 antibody (HA750546) at 1/250 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

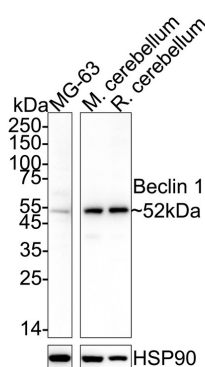
Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4°C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Fig2: Western blot analysis of Beclin 1 on different lysates with Rabbit anti-Beclin 1 antibody (HA750546) at 1/1,000 dilution.

Lane 1: MG-63 cell lysate (20 µg/Lane)

Lane 2: Mouse cerebellum tissue lysate (40 µg/Lane)

Lane 3: Rat cerebellum tissue lysate (40 µg/Lane)



Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: Lane 1: 3 minutes; Lane 2-3: 30 seconds;; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750546) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

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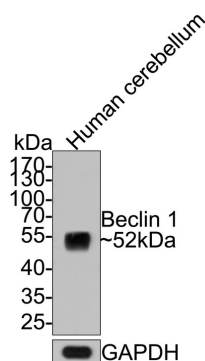


Fig3: Western blot analysis of Beclin 1 on human cerebellum tissue lysates with Rabbit anti-Beclin 1 antibody (HA750546) at 1/500 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: 1 minute;

10% SDS-PAGE gel.

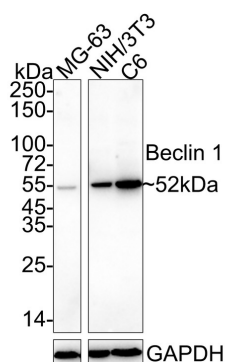
Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750546) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

Fig4: Western blot analysis of Beclin 1 on different lysates with Rabbit anti-Beclin 1 antibody (HA750546) at 1/500 dilution.

Lane 1: MG-63 cell lysate

Lane 2: NIH/3T3 cell lysate

Lane 3: C6 cell lysate



Lysates/proteins at 20 µg/Lane.

Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: 1 minute; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750546) at 1/500 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

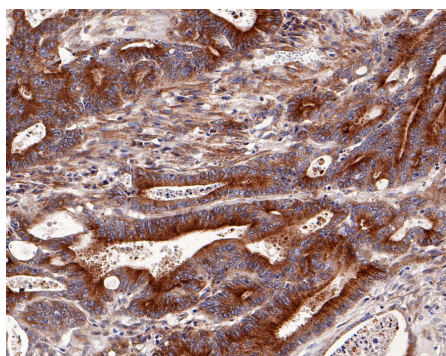


Fig5: Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue with Rabbit anti-Beclin 1 antibody (HA750546) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA750546) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

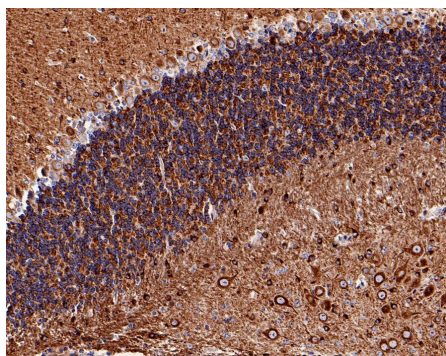


Fig6: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-Beclin 1 antibody (HA750546) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA750546) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Hill SM et al. VCP/p97 regulates Beclin-1-dependent autophagy initiation. Nat Chem Biol. 2021 Apr
2. Liu Y et al. TLR9 and beclin 1 crosstalk regulates muscle AMPK activation in exercise. Nature. 2020 Feb

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