

# Anti-Beclin 1 Antibody [JE59-31]

HA721216



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

<b>Description:</b>	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 <i>C. elegans</i> 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.
<b>Immunogen:</b>	Recombinant protein within Human Beclin 1 aa 351-450 / 450.
<b>Positive control:</b>	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.
<b>Subcellular location:</b>	Cytoplasm, Golgi apparatus, trans-Golgi network membrane, Endosome membrane, Endoplasmic reticulum membrane, Mitochondrion membrane, Endosome, Cytoplasmic vesicle, autophagosome.
<b>Database links:</b>	SwissProt: Q14457 Human   O88597 Mouse   Q91XJ1 Rat
<b>Recommended Dilutions:</b>	
<b>WB</b>	1:500-1:1,000
<b>IHC-P</b>	1:200
<b>IF-Cell</b>	1:250
<b>Storage Buffer:</b>	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% SodiumAzide.
<b>Storage Instruction:</b>	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
<b>Purity:</b>	Protein A affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

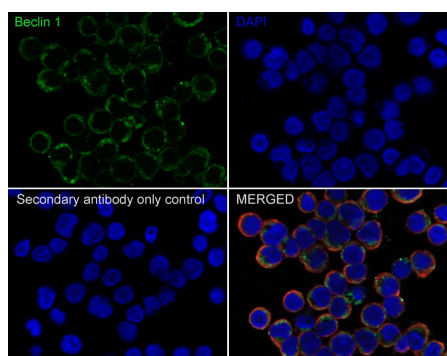
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

## Images

**Fig1:** Immunocytochemistry analysis of Raji cells labeling Beclin 1 with Rabbit anti-Beclin 1 antibody (HA721216) 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 (HA721216) 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.

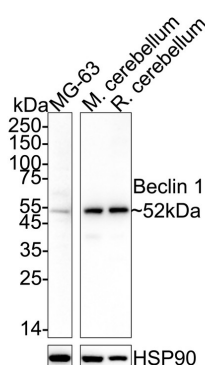
Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4°C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

**Fig2:** Western blot analysis of Beclin 1 on different lysates with Rabbit anti-Beclin 1 antibody (HA721216) 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 (HA721216) 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.

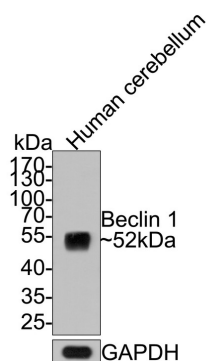
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**Fig3:** Western blot analysis of Beclin 1 on human cerebellum tissue lysates with Rabbit anti-Beclin 1 antibody (HA721216) at 1/500 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: 1 minute;

10% SDS-PAGE gel.

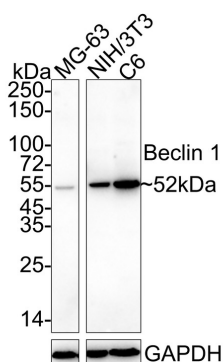
Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721216) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

**Fig4:** Western blot analysis of Beclin 1 on different lysates with Rabbit anti-Beclin 1 antibody (HA721216) 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.

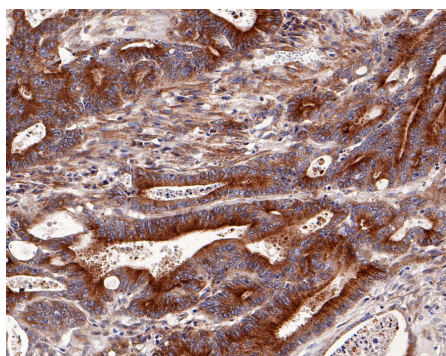
Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: 1 minute; ECL: K1802;

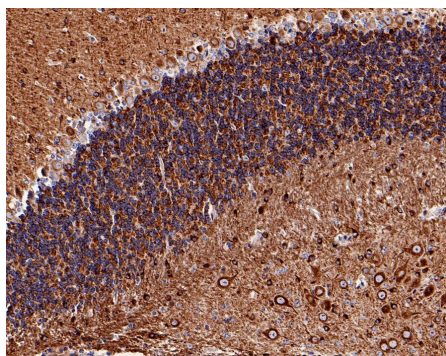
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721216) 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 (HA721216) 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 ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721216) 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 (HA721216) 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 ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA721216) 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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