

Beclin-1 monoclonal antibody

Catalog: MB67099

Host: Mouse

Reactivity: Human

BackGround:

Autophagy is a catabolic process for the autophagosome-lysosomal degradation of proteins activated in response to nutrient deprivation and in neurodegenerative conditions. One of the proteins critical to this process is Beclin-1, the mammalian orthologue of the yeast autophagy protein Apg6/Vps30. Beclin-1 can complement defects in yeast autophagy caused by loss of Apg6 and can also stimulate autophagy when overexpressed in mammalian cells. Mammalian Beclin-1 was originally isolated in a yeast two-hybrid screen for Bcl-2 interacting proteins and has been shown to interact with Bcl-2 and Bcl-xL, but not with Bax or Bak. While Beclin-1 is generally ubiquitously expressed, research studies have shown it is monoallelically deleted in 40-75% of sporadic human breast and ovarian cancers. Beclin-1 is localized within cytoplasmic structures including the mitochondria, although overexpression of Beclin-1 reveals some nuclear staining and CRM1-dependent nuclear export. Investigators have demonstrated that Beclin-1^{-/-} mice die early in embryogenesis and Beclin-1^{-/+} mice have a high incidence of spontaneous tumors. Stem cells from the null mice demonstrate an altered autophagic response, although responses to apoptosis appeared normal. Researchers have also found that overexpression of Beclin-1 in virally infected neurons in vivo resulted in significant protection against Sindbis virus-induced disease and neuronal apoptosis.

Product:

Mouse IgG3 kappa. Supplied in crude ascites with 0.01% sodium azide.

Molecular Weight:

~ 57 kDa

Swiss-Prot:

Q14457

Purification&Purity:

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF/ICC (1/10 - 1/50)

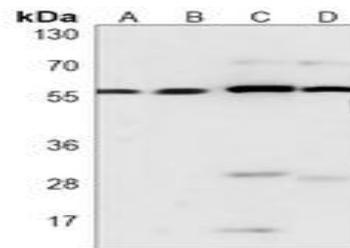
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

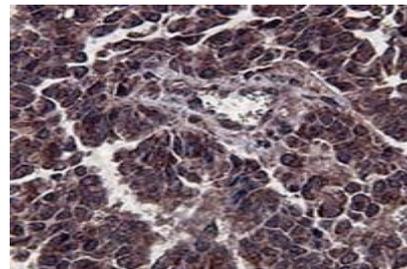
Specificity:

Recognizes endogenous levels of Beclin-1 protein.

DATA:



Western blot analysis of Beclin-1 expression in HepG2 (A), 293 (B), Jurkat (C), HeLa (D) whole cell lysates.



Immunohistochemical analysis of Beclin-1 staining in human breast carcinoma formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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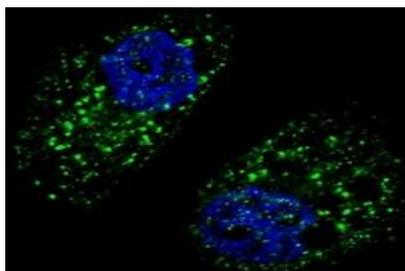
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Immunofluorescent analysis of Beclin-1 staining in U251 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated

secondary antibody (green) in PBS at room temperature in the dark.

DAPI was used to stain the cell nuclei (blue).

Note:

For research use only, not for use in diagnostic procedure.

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