

Product datasheet for **AM20210PU-N**

Beclin 1 (BECN1) Mouse Monoclonal Antibody [Clone ID: 12B4]

Product data:

Product Type:	Primary Antibodies
Clone Name:	12B4
Applications:	WB
Recommended Dilution:	Immunoblotting: 0.5 µg/ml for HRPO/ECL detection. <i>Recommended blocking buffer:</i> Casein/Tween 20 based blocking and blot incubation buffer. <i>Included Positive Control:</i> Cell lysate from untreated Neuro 2A (See Protocols for more details).
Reactivity:	Canine, Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Synthetic peptide conjugated to hemocyanin derived from Beclin sequence.
Specificity:	This Monoclonal antibody recognizes Beclin at 52 kDa in Western-blot application.
Formulation:	PBS containing 0.09% Sodium Azide, PEG, Sucrose and 50% Glycerol. State: Purified State: Liquid purified IgG fraction.
Concentration:	lot specific
Purification:	Subsequent Ultrafiltration and Size Exclusion Chromatography.
Conjugation:	Unconjugated
Storage:	Upon receipt, store (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	52 kDa
Gene Name:	beclin 1
Database Link:	Entrez Gene 56208 Mouse Entrez Gene 114558 Rat Entrez Gene 8678 Human Q14457



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Background:

Beclin 1 is a ubiquitous coiled-coil protein that plays a central role in autophagy. It interacts with several cofactors (Ambra1, Bif1, UVRAG) to activate the lipid kinase Vps34, thereby inducing autophagy. In normal conditions, the BH3 domain of Beclin 1 is bound to, and inhibited by, Bcl2 or Bcl-X(L). This interaction can be disrupted by BH3-only proteins to induce autophagy. Nutrient starvation, a potent physiological inducer of autophagy, can stimulate the dissociation of Beclin 1 from its inhibitors, either by activating BH3-only proteins, such as Bad, or by post-translational modifications of Bcl2.

Beclin 1 may play a role in anti-viral host defence, and protects against infection by a neurovirulent strain of Sindbis virus. Beclin 1 is also a haploinsufficient tumour suppressor. Genetic studies revealed that Beclin-1 has structural similarity to the yeast autophagy gene, atg6. Beclin-1 is part of a complex with class III PI3 kinase, Vsp34, that is responsible for autophagosome formation.

Synonyms:

BECN1, GT197

Note:

Protocol: **Positive Control: Cell lysate from untreated Neuro2A cells, brain endothelioma (Mouse)**

Format: Lyophilized cell lysate from serum starved Neuro 2A cells.

Reconstitution: Restore by addition of 200 μ l H₂O. After complete solubilization add 200 μ l 2x SDS-PAGE sample buffer, mix and incubate at 90°C for 5 min.

Application: The positive control cell lysate is recommended for immunoblot applications. 20 μ l of positive control cell lysate correspond to ca. 20,000 cells.

Use 20 μ l/lane (mini gel) for HRPO/ECL detection of the target proteins.

Please NOTE: The lyophilized cell lysates contain SDS and are not recommended for applications with native proteins such as in immunoprecipitation.

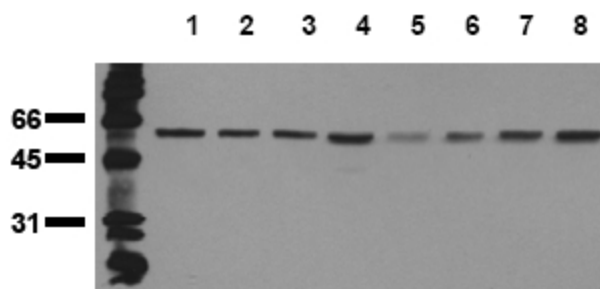
Storage: Aliquote reconstituted product and store frozen. Avoid repeated freezing and thawing.

Protein Families:

Druggable Genome

Protein Pathways:

Regulation of autophagy

Product images:

Detection of endogenous Beclin: Whole cell lysates of untreated tumor cells were applied to SDS-PAGE and transferred to a PVDF membrane. The immunoblot was probed with Beclin antibody (Clone 12B4) at 0.5 μ g/ml for 1h at RT and developed by ECL (exp. time: 30 sec). Lane 1: HeLa Lane 2: HepG2 Lane 3: HEK 293 Lane 4: SH-SY5Y Lane 5: MDCK Lane 6: PC12 Lane 7: CMT Lane 8: Neuro2A