**Beclin-1 Antibody**

For Research Use Only. Not for Use in Diagnostic Procedures.

### Applications
- **WB**: Western Blotting
- **IP**: Immunoprecipitation

### Reactivity
- **H M R**

### Sensitivity
- Endogenous

### MW (kDa)
- 60

### Source
- Rabbit

### UniProt ID
- #Q14457

### Entrez-Gene Id
- 8678

### Storage
Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

### Specificity / Sensitivity
Beclin-1 Antibody detects endogenous levels of total Beclin-1 protein.

### Source / Purification
Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding threonine 72 of human Beclin-1. Antibodies are purified by protein A and peptide affinity chromatography.

### Background
Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of proteins activated in response to nutrient deprivation and in neurodegenerative conditions (1). One of the proteins critical to this process is Beclin-1, the mammalian orthologue of the yeast autophagy protein Apg6/Vps30 (2). Beclin-1 can complement defects in yeast autophagy caused by loss of Apg6 and can also stimulate autophagy when overexpressed in mammalian cells (3). 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 (4). 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 (5). Beclin-1 is localized within cytoplasmic structures including the mitochondria, although overexpression of Beclin-1 reveals some nuclear staining and CRM1-dependent nuclear export (6). 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 (7). 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 (4).

### Background References

### Species Reactivity
Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer
IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key
- **WB**: Western Blotting
- **IP**: Immunoprecipitation

### Cross-Reactivity Key
- **H**: human
- **M**: mouse
- **R**: rat
- **Hm**: hamster
- **Mk**: monkey
- **Vir**: virus
- **Mi**: mink
- **C**: chicken
- **Dm**: D. melanogaster
- **X**: Xenopus
- **Z**: zebrafish
- **B**: bovine
- **Dg**: dog
- **Pg**: pig
- **Sc**: S. cerevisiae
- **Ce**: C. elegans
- **Hr**: horse
- **GP**: Guinea Pig
- **Rab**: rabbit
- **All**: all species expected

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