

## Technical Data Sheet

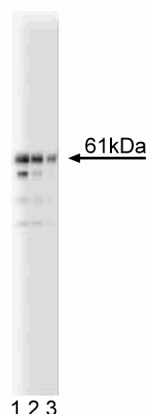
**Purified Mouse Anti-Beclin****Product Information**

<b>Material Number:</b>	<b>612113</b>
<b>Size:</b>	150 µg
<b>Concentration:</b>	250 µg/ml
<b>Clone:</b>	20/Beclin
<b>Immunogen:</b>	Human Beclin aa. 171-291
<b>Isotype:</b>	Mouse IgG2a
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Mouse, Rat, Chicken, Dog
<b>Target MW:</b>	61 kDa
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

**Description**

Autophagy is the bulk degradation of cellular proteins through the autophagosomic-lysosomal pathway. This process is important for normal cell growth, and may be disrupted in tumor cells. Beclin is a Bcl-2 binding protein that is homologous to the yeast autophagy gene, *apg6/vps30*. The structure of beclin includes a Bcl-2 binding coiled-coil region, and a leucine-rich nuclear export signal (NES). Beclin protein colocalizes with intracytoplasmic organelles and nuclei in normal COS7 and MCF7 cells. However, inhibition of CRM1-dependent nuclear export leads to beclin localization primarily in the nucleus. Mutation of the NES domain of beclin also prevents nuclear export, as well as suppresses beclin-mediated nutrient deprivation-induced autophagy. In addition, these beclin mutants can not inhibit in vitro clonogenicity and in vivo tumorigenicity of MCF7 cells. Beclin interaction with Bcl-2 may be involved with host viral defense, since overexpression of beclin inhibits Sindbis virus replication and expression of beclin lacking the Bcl-2 binding domain has no antiviral effects. Thus, beclin may be an important component of complexes involved in autophagy.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



**Western blot analysis of Beclin on a Jurkat lysate.** Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of the anti-Beclin antibody.

**Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20° C.

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## Application Notes

### Application

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

## Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

Aita VM, Liang XH, Murty VV, et al. Cloning and genomic organization of beclin 1, a candidate tumor suppressor gene on chromosome 17q21. *Genomics*. 1999; 59(1):59-65.(Biology)

Liang XH, Jackson S, Seaman M, et al. Induction of autophagy and inhibition of tumorigenesis by beclin 1. *Nature*. 1999; 402(6762):672-676.(Biology)

Liang XH, Kleeman LK, Jiang HH, et al. Protection against fatal Sindbis virus encephalitis by beclin, a novel Bcl-2-interacting protein. *J Virol*. 1998; 72(11):8586-8596.(Biology)

Liang XH, Yu J, Brown K, Levine B. Beclin 1 contains a leucine-rich nuclear export signal that is required for its autophagy and tumor suppressor function. *Cancer Res*. 2001; 61(8):3443-3449.(Biology)