

Store at
-20°C

#59187

Beclin-1 Complex Antibody Sampler Kit



Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/support

Orders: 877-616-2355 (U.S.)
orders@cellsignal.com

New 05/19

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
Beclin-1 (D40C5) Rabbit mAb	3495	20 µl	60 kDa	Rabbit IgG
PI3 Kinase Class III (D9A5) Rabbit mAb	4263	20 µl	100 kDa	Rabbit IgG
PIK3R4 Antibody	14580	20 µl	153 kDa	Rabbit
Atg14 (D1A1N) Rabbit mAb	96752	20 µl	65 kDa	Rabbit IgG
UVRAG (D2Q1Z) Rabbit mAb	13115	20 µl	90 kDa	Rabbit IgG
Rubicon (D9F7) Rabbit mAb	8465	20 µl	130 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions and additional application protocols.

Description: The Beclin-1 Complex Antibody Sampler Kit provides an economical means of detecting proteins that are part of the Beclin-1 complexes. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Background: A number of studies have identified distinct complexes involving Beclin-1 and PI3K Kinase Class III with specific roles in autophagy and vesicle trafficking (1,2). These complexes commonly contain Beclin-1, PI3KC3/VSP34, and PIK3R4/VPS15 and function to catalyze the phosphorylation of phosphatidylinositol at the D3 position, producing phosphatidylinositol-3-phosphate. Specificity of PI3KC3 activity is regulated by additional binding partners. Complex 1 contains Atg14 which is required for early stages of autophagosome nucleation (3,4). Complex 2 lacks Atg14, but instead contains UVRAG, and is important for autophagosome maturation and endocytic trafficking (4-6). A third complex, containing both UVRAG and Rubicon, negatively regulates canonical autophagy (7,8). Importantly, this complex containing Rubicon is critical for a related process of LC3-associated phagocytosis (LAP) in which extracellular pathogens binding to cell surface receptors are engulfed by a single membrane phagosome and degraded by the lysosome (9,10).

Specificity/Sensitivity: Each antibody in the Beclin-1 Complex Antibody Sampler Kit detects endogenous levels of its target protein. Rubicon (D9F7) Rabbit mAb detects a band of unknown origin at 55 kDa.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding Thr72 of human Beclin-1, Lys630 of human PI3 Kinase Class III, Arg70 of human Atg14, Gly502 of human UVRAG, and Leu210 of human Rubicon. Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly825 of human PIK3R4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Please visit www.cellsignal.com for validation data and a complete listing of recommended companion products.

Background References:

- (1) Levine, B. and Kroemer, G. (2019) *Cell* 176, 11-42.
- (2) Mei, Y. et al. (2016) *Protein Sci* 25, 1767-85.
- (3) Sun, Q. et al. (2008) *Proc Natl Acad Sci U S A* 105, 19211-6.
- (4) Itakura, E. et al. (2008) *Mol Biol Cell* 19, 5360-72.
- (5) Liang, C. et al. (2006) *Nat Cell Biol* 8, 688-99.
- (6) Liang, C. et al. (2008) *Nat Cell Biol* 10, 776-87.
- (7) Matsunaga, K. et al. (2009) *Nat Cell Biol* 11, 385-96.
- (8) Zhong, Y. et al. (2009) *Nat Cell Biol* 11, 468-76.
- (9) Martinez, J. et al. (2015) *Nat Cell Biol* 17, 893-906.
- (10) Heckmann, B.L. and Green, D.R. (2019) *J Cell Sci* 132(5). pii: jcs222984. doi: 10.1242/jcs.222984.

Thank you for your recent purchase. If you would like to provide a review visit www.cellsignal.com/comments.

www.cellsignal.com

© 2019 Cell Signaling Technology, Inc.

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig S—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.