

Beclin-1 (Ser15) Antibody

Subcategory: Phosphospecific Antibody, Rabbit Polyclonal Antibody

Cat. No.: 254515

Unit: 0.1 ml

Description:

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. Beclin-1, a coiled-coil Bcl-2-interacting protein homologous to the yeast autophagy gene *apg6*, is a mammalian autophagy gene that can inhibit tumorigenesis and is expressed at reduced levels in human breast carcinoma, suggesting that defects in autophagy proteins may contribute to the development or progression of tumors. Bcl-2 can bind to Beclin-1 and inhibit Beclin-1-dependent autophagy in yeast and mammalian cells, suggesting that Bcl-2 functions as an anti-autophagy protein as well as an anti-apoptotic protein, which helps maintain autophagy at levels that are more compatible with cell survival rather than cell death. ULK1 protein kinase and the VPS34 lipid kinase are key regulators of autophagy initiation and progression. Activated during low nutrient conditions, ULK1 directly phosphorylates Beclin-1 at multiple sites including Ser15.

Isotype: Rabbit Ig

Applications: E, IP, WB

Species Reactivity: H, M

Format: Each vial contains 0.1 ml IgG in PBS pH7.4, 0.1% BSA and 20% glycerol. Antibody was purified by immunogen affinity chromatography.

Alternate Names: Beclin-1 ; Coiled-coil myosin-like Bcl-2-interacting protein; Protein GT197; BECN1

Accession No.: Q14457

Antigen: KLH-conjugated synthetic phosphopeptide encompassing a sequence surrounding Ser15 of human beclin-1.

Application Notes: Beclin-1 (Ser15) Antibody recognizes endogenous and transfected levels of Beclin-1 only when phosphorylated at Ser15 (Ser14 in mouse). Low endogenous expression levels are at the detection limit of this antibody. E:

1:500-1:2,000; WB: 1:100-1:1,000; IP: 1:100-1:200



ATG14L stimulates Beclin-1 Ser14 phosphorylation by promoting association with ULK1. Beclin-1 (murine) alone (left panel) or Beclin-1 and ATG14L (right panel) were overexpressed in HEK293 cells. ULK1 was added to each complex and reactions were quenched at the indicated time points. Phosphorylation of murine Beclin-1 was detected at Ser14 by using the Beclin-1 (Ser15) Antibody (Cat. No. 254515). Data kindly provided by Drs. R. Russell and K-L. Guan at University of California San Diego, La Jolla, CA (USA).

Storage: Store at -20°C. Minimize freeze-thaw cycles. Product is guaranteed 6 months from the date of shipment.

Product Citations: Russell R. et al. 2013 May 19. Nature Cell Biology. DOI: 10.101038/ncb2757 PMID# 23685627

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