

#46486 Store at -20°C

Autophagy Induction (ULK1 Complex) Antibody Sampler Kit



Cell Signaling
TECHNOLOGY®

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

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

1 Kit (6 x 20 microliters)

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
ULK1 (D8H5) Rabbit mAb	8054	20 µl	150 kDa	Rabbit IgG
Atg13 (D4P1K) Rabbit mAb	13273	20 µl	72 kDa	Rabbit IgG
FIP200 (D10D11) Rabbit mAb	12436	20 µl	200 kDa	Rabbit IgG
Atg101 (E1Z4W) Rabbit mAb	13492	20 µl	25 kDa	Rabbit IgG
Phospho-ULK1 (Ser757) (D7O6U) Rabbit mAb	14202	20 µl	140-150 kDa	Rabbit IgG
Phospho-ULK1 (Ser555) (D1H4) Rabbit mAb	5869	20 µl	140-150 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Autophagy Induction (ULK1 Complex) Antibody Sampler Kit provides an economical means of detecting target proteins in the ULK1 complex. The kit contains enough antibody to perform at least two western blot experiments per primary antibody.

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 antibodies.

Background

Autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmic contents (1,2). Autophagy is generally activated by conditions of nutrient deprivation but has also been associated with a number of physiological processes including development, differentiation, neurodegeneration, infection, and cancer (3). The molecular machinery of autophagy was largely discovered in yeast and referred to as autophagy-related (Atg) genes. ULK1, Atg13, and FIP200 form a complex that localizes to autophagic isolation membranes and regulates autophagosome biogenesis (4-6). mTOR phosphorylates both Atg13 and ULK1, suppressing ULK1 kinase activity and autophagy (5-7). Interaction between Atg101 and Atg13 can be important for the stability and basal phosphorylation of Atg13 and ULK1 (8,9). AMPK, activated during low nutrient conditions, directly phosphorylates ULK1 at multiple sites including Ser317, Ser555, and Ser777 (7,10). Conversely, mTOR, which is a regulator of cell growth and is an inhibitor of autophagy, phosphorylates ULK1 at Ser757 and disrupts the interaction between ULK1 and AMPK (7).

Background References

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