SANTA CRUZ BIOTECHNOLOGY, INC.

# ULK2 (G-16): sc-10909

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

## BACKGROUND

ULK1 and ULK2 (for UNC-51-like kinase) encode similar amino-terminal serine/threonine kinase domains, a proline/serine-rich (PS) domain, and a species conserved carboxyl-terminal domain. Both share homology with the UNC-51 kinase from *Caenorhabditis elegans* and the APG1 kinase in yeast, which are involved in axonal extension and growth, and autophagy, respectively. ULK1 maps to human chromosome 12q24.33, and is ubiquitously expressed. ULK2, also widely expressed, maps to mouse chromosome 11 B2 and is expected to have a similar molecular weight as ULK1 in human. ULK1 and ULK2 are thought to auto-phosphorylate the PS domain *in vitro,* and the significant homology among vertebrates suggest that ULK1 and ULK2 are involved in the regulation of fundamental biological processes.

## REFERENCES


1. Ogura, K., Wicky, C., Magnenat, L., Tobler, H., Mori, I., Muller, F. and Ohshima, Y. 1994. *Caenorhabditis elegans* unc-51 gene required for axonal elongation encodes a novel serine/threonine kinase. Genes Dev. 8: 2389-2400.
2. Matsuura, A., Tsukada, M., Wada, Y. and Ohsumi, Y. 1997. apg1p, a novel protein kinase required for the autophagic process in *Saccharomyces cerevisiae*. Gene 192: 245-250.
3. Kuroyanagi, H., Yan, J., Seki, N., Yamanouchi, Y., Suzuki, Y., Takano, T., Muramatsu, M. and Shirasawa, T. 1998. Human ULK1, a novel serine/threonine kinase related to UNC-51 kinase of *Caenorhabditis elegans:* cDNA cloning, expression, and chromosomal assignment. Genomics 51: 76-85.
4. Yan, J., Kuroyanagi, H., Kuroiwa, A., Matsuda, Y., Tokumitsu, H., Tomoda, T., Shirasawa, T. and Muramatsu, M. 1998. Identification of mouse ULK1, a novel protein kinase structurally related to *C. elegans* UNC-51. Biochem. Biophys. Res. Commun. 246: 222-227.


## CHROMOSOMAL LOCATION

Genetic locus: ULK2 (human) mapping to 17p11.2; Ulk2 (mouse) mapping to 11 B2.

## SOURCE

ULK2 (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ULK2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10909 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

ULK2 (G-16) is recommended for detection of ULK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ULK2 (G-16) is also recommended for detection of ULK2 in additional species, including equine and canine.

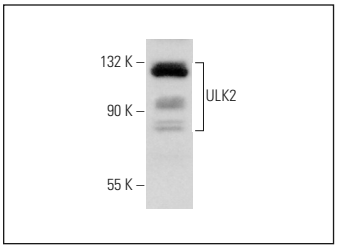
Suitable for use as control antibody for ULK2 siRNA (h): sc-44183, ULK2 siRNA (m): sc-154914, ULK2 shRNA Plasmid (h): sc-44183-SH, ULK2 shRNA Plasmid (m): sc-154914-SH, ULK2 shRNA (h) Lentiviral Particles: sc-44183-V and ULK2 shRNA (m) Lentiviral Particles: sc-154914-V.

Positive Controls: mouse brain extract: sc-2253.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




ULK2 (G-16): sc-10909. Western blot analysis of ULK2 expression in mouse brain tissue extract.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfaction Guaranteed

Try **ULK2 (2A12): sc-293453**, our highly recommended monoclonal alternative to ULK2 (G-16).