

ULK3 (1404CT148.89.25): sc-517373

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. ULK3 (unc-51-like kinase 3) is a 214 amino acid protein that contains one protein kinase domain and functions to catalyze the ATP-dependent phosphorylation of target proteins. The gene encoding ULK3 maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome.

REFERENCES

- Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. *Nature* 331: 22.
- Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. *Science* 241: 42-52.
- Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. *Methods Enzymol.* 200: 38-62.
- Vuori, K.A., Nordlund, E., Kallio, J., Salakoski, T. and Nikinmaa, M. 2008. Tissue-specific expression of aryl hydrocarbon receptor and putative developmental regulatory modules in Baltic salmon yolk-sac fry. *Aquat. Toxicol.* 87: 19-27.
- Daub, H., Olsen, J.V., Bairlein, M., Gnad, F., Oppermann, F.S., Körner, R., Greff, Z., Keri, G., Stemmann, O. and Mann, M. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. *Mol. Cell* 31: 438-448.

CHROMOSOMAL LOCATION

Genetic locus: ULK3 (human) mapping to 15q24.1; Ulk3 (mouse) mapping to 9 B.

SOURCE

ULK3 (1404CT148.89.25) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 435-468 in the C-terminal region of ULK3 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

ULK3 (1404CT148.89.25) is recommended for detection of ULK3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for ULK3 siRNA (h): sc-89940, ULK3 siRNA (m): sc-154915, ULK3 shRNA Plasmid (h): sc-89940-SH, ULK3 shRNA Plasmid (m): sc-154915-SH, ULK3 shRNA (h) Lentiviral Particles: sc-89940-V and ULK3 shRNA (m) Lentiviral Particles: sc-154915-V.

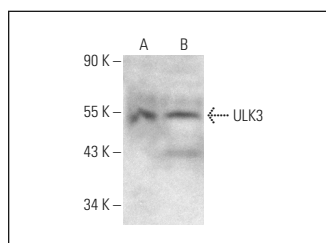
Molecular Weight of ULK3 isoforms 1/2: 53/24 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



ULK3 (1404CT148.89.25): sc-517373. Western blot analysis of ULK3 expression in HeLa (A) and LNCaP (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Goruppi, S., Clocchiatti, A., Bottoni, G., Di Cicco, E., Ma, M., Tassone, B., Neel, V., Demehri, S., Simon, C. and Paolo Dotto, G. 2023. The ULK3 kinase is a determinant of keratinocyte self-renewal and tumorigenesis targeting the arginine methylome. *Nat. Commun.* 14: 887.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.