SANTA CRUZ BIOTECHNOLOGY, INC.

UHMK1 (C-2): sc-393605

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. UHMK1 (U2AF homology motif kinase 1), also known as KIS (kinase interacting with stathmin) or KIST, is a 419 amino acid nuclear protein that contains one protein kinase domain and one RRM domain and belongs to the Ser/Thr protein kinase family. Expressed in a variety of tissues with highest levels present in placenta, kidney and skeletal muscle, UHMK1 functions to catalyze the ATP-dependent phosphorylation of target proteins, such as p27, and is thought to be involved in cell cycle regulation, as well as in the trafficking and processing of RNA. Multiple isoforms of UHMK1 exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: UHMK1 (human) mapping to 1q23.3; Uhmk1 (mouse) mapping to 1 H3.

SOURCE

UHMK1 (C-2) is a mouse monoclonal antibody raised against amino acids 181-419 mapping at the C-terminus of UHMK1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

UHMK1 (C-2) is available conjugated to agarose (sc-393605 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393605 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393605 PE), fluorescein (sc-393605 FITC), Alexa Fluor® 488 (sc-393605 AF488), Alexa Fluor® 546 (sc-393605 AF546), Alexa Fluor® 594 (sc-393605 AF594) or Alexa Fluor® 647 (sc-393605 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393605 AF680) or Alexa Fluor® 790 (sc-393605 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

UHMK1 (C-2) is recommended for detection of UHMK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for UHMK1 siRNA (h): sc-78640, UHMK1 siRNA (m): sc-106671, UHMK1 shRNA Plasmid (h): sc-78640-SH, UHMK1 shRNA Plasmid (m): sc-106671-SH, UHMK1 shRNA (h) Lentiviral Particles: sc-78640-V and UHMK1 shRNA (m) Lentiviral Particles: sc-106671-V.

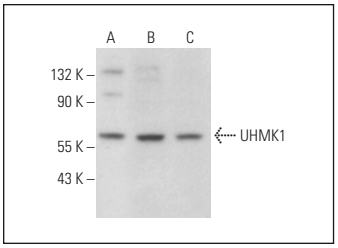
Molecular Weight of UHMK1: 49 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, KNRK whole cell lysate: sc-2214 or A-673 cell lysate: sc-2414.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



UHMK1 (C-2): sc-393605. Western blot analysis of UHMK1 expression in A-673 (**A**), NIH/3T3 (**B**) and KNRK (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yu, D., et al. 2019. The myristoylated alanine-rich C kinase substrate differentially regulates kinase interacting with stathmin in vascular smooth muscle and endothelial cells and potentiates intimal hyperplasia formation. J. Vasc. Surg. 70: 2021-2031.e1.
2. Feng, X., et al. 2020. UHMK1 promotes gastric cancer progression through reprogramming nucleotide metabolism. EMBO J. 39: e102541.
3. Niu, H., et al. 2022. UHMK1-dependent phosphorylation of Cajal body protein coilin alters 5-FU sensitivity in colon cancer cells. Cell Commun. Signal. 20: 18.

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.

PROTOCOLS

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