

UHMK1 (F-21): sc-130909

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.

REFERENCES

1. Maucuer, A., et al. 1995. Stathmin interaction with a putative kinase and coiled-coil-forming protein domains. *Proc. Natl. Acad. Sci. USA* 92: 3100-3104.
2. Boehm, M., et al. 2002. A growth factor-dependent nuclear kinase phosphorylates p27^{kip1} and regulates cell cycle progression. *EMBO J.* 21: 3390-3401.

CHROMOSOMAL LOCATION

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

SOURCE

UHMK1 (F-21) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of UHMK1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

UHMK1 (F-21) is recommended for detection of UHMK1 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (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.

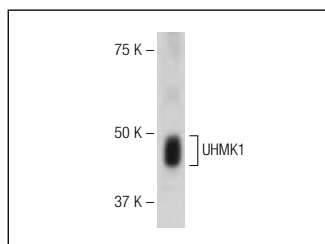
Molecular Weight of UHMK1: 49 kDa.

Positive Controls: mouse heart extract: sc-2254.

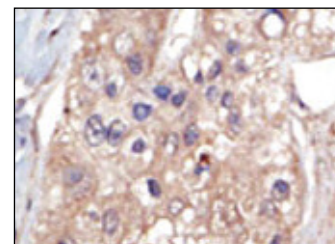
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



UHMK1 (F-21): sc-130909. Western blot analysis of UHMK1 expression in mouse heart tissue extract.



UHMK1 (F-21): sc-130909. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wang, H.C. and Lee, W.S. 2014. Progesterone induces RhoA Inactivation in male rat aortic smooth muscle cells through up-regulation of p27^{kip1}. *Endocrinology* 155: 4473-4482.

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 or our catalog for detailed protocols and support products.



Try **UHMK1 (C-2): sc-393605**, our highly recommended monoclonal alternative to UHMK1 (F-21).