SANTA CRUZ BIOTECHNOLOGY, INC.

UCKL1 (B-11): sc-515466

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

UCKL1 (uridine-cytidine kinase 1-like 1), also known as UCK1L, URKL1 or F538, is a ubiquitously expressed 548 amino acid member of the uridine kinase family. Localized to the cytoplasm and translocated to the nucleus via interaction with EBV EBNA-3A (an Epstein-Barr nuclear antigen), UCKL1 is thought to participate in pyrimidine metabolism by accumulating UTP and CTP, both of which are needed for cell proliferation and blast transformation. UCKL1 contains an N-terminal ATP/GTP-binding site and, once relocated to the nucleus, becomes part of the ATP-dependent ribonucleotide salvage pathway that catalytically converts UTP and CTP to UMP and CMP, respectively. In addition, UCKL1 functions as a substrate for the E3 ligase NKLAM, thereby causing the ubiquitin-mediated degradation of UCKL1. Three isoforms of UCKL1 are expressed due to alternative splicing events.

REFERENCES

1. Tomkinson, B., Robertson, E. and Kieff, E. 1993. Epstein-Barr virus nuclear proteins EBNA-3A and EBNA-3C are essential for B-lymphocyte growth transformation. J. Virol. 67: 2014-2025.
2. Kashuba, E., Kashuba, V., Sandalova, T., Klein, G. and Szekely, L. 2002. Epstein-Barr virus encoded nuclear protein EBNA-3 binds a novel human uridine kinase/uracil phosphoribosyltransferase. BMC Cell Biol. 3: 23.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610866. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Fortier, J.M. and Kornbluth, J. 2006. NK lytic-associated molecule, involved in NK cytotoxic function, is an E3 ligase. J. Immunol. 176: 6454-6463.

CHROMOSOMAL LOCATION

Genetic locus: UCKL1 (human) mapping to 20q13.33; Uckl1 (mouse) mapping to 2 H4.

SOURCE

UCKL1 (B-11) is a mouse monoclonal antibody raised against amino acids 31-142 mapping near the N-terminus of UCKL1 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.

UCKL1 (B-11) is available conjugated to agarose (sc-515466 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515466 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515466 PE), fluorescein (sc-515466 FITC), Alexa Fluor® 488 (sc-515466 AF488), Alexa Fluor® 546 (sc-515466 AF546), Alexa Fluor® 594 (sc-515466 AF594) or Alexa Fluor® 647 (sc-515466 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515466 AF680) or Alexa Fluor® 790 (sc-515466 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

UCKL1 (B-11) is recommended for detection of UCKL1 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 UCKL1 siRNA (h): sc-76799, UCKL1 siRNA (m): sc-154886, UCKL1 shRNA Plasmid (h): sc-76799-SH, UCKL1 shRNA Plasmid (m): sc-154886-SH, UCKL1 shRNA (h) Lentiviral Particles: sc-76799-V and UCKL1 shRNA (m) Lentiviral Particles: sc-154886-V.

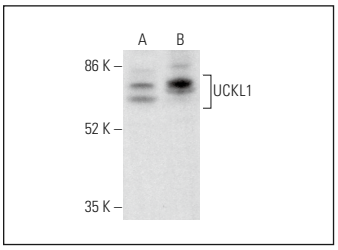
Molecular Weight of UCKL1: 61 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HEK293 whole cell lysate: sc-45136 or NIH/3T3 whole cell lysate: sc-2210.

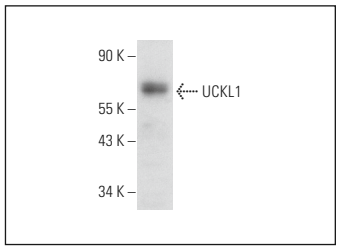
RECOMMENDED SUPPORT REAGENTS

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



UCKL1 (B-11): sc-515466. Western blot analysis of UCKL1 expression in HEK293 (**A**) and NIH/3T3 (**B**) whole cell lysates.



UCKL1 (B-11): sc-515466. Western blot analysis of UCKL1 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Matchett, E., et al. 2022. Characterization of uridine-cytidine kinase like-1 nucleoside kinase activity and its role in tumor growth. Biochem. J. 479: 1149-1164.

RESEARCH USE

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