

# UCKL1 (K-16): sc-85991

## 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

- 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.
- 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.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610866. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- 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.
- Islam, M.R., Kim, H., Kang, S.W., Kim, J.S., Jeong, Y.M., Hwang, H.J., Lee, S.Y., Woo, J.C. and Kim, S.G. 2007. Functional characterization of a gene encoding a dual domain for uridine kinase and uracil phosphoribosyltransferase in *Arabidopsis thaliana*. *Plant Mol. Biol.* 63: 465-477.

## CHROMOSOMAL LOCATION

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

## SOURCE

UCKL1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UCKL1 of human 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-85991 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

UCKL1 (K-16) is recommended for detection of UCKL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

UCKL1 (K-16) is also recommended for detection of UCKL1 in additional species, including canine, bovine and avian.

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: NIH/3T3 whole cell lysate: sc-2210.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **UCKL1 (B-11): sc-515466** or **UCKL1 (SY-16): sc-100636**, our highly recommended monoclonal alternatives to UCKL1 (K-16).