

UCKL1 siRNA (h): sc-76799

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

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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.
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CHROMOSOMAL LOCATION

Genetic locus: UCKL1 (human) mapping to 20q13.33.

PRODUCT

UCKL1 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UCKL1 shRNA Plasmid (h): sc-76799-SH and UCKL1 shRNA (h) Lentiviral Particles: sc-76799-V as alternate gene silencing products.

For independent verification of UCKL1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76799A, sc-76799B and sc-76799C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

UCKL1 siRNA (h) is recommended for the inhibition of UCKL1 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

UCKL1 (B-11): sc-515466 is recommended as a control antibody for monitoring of UCKL1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UCKL1 gene expression knockdown using RT-PCR Primer: UCKL1 (h)-PR: sc-76799-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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