SANTA CRUZ BIOTECHNOLOGY, INC.

Cdc2L5 siRNA (m): sc-72836

BACKGROUND

The eukaryotic cell division cycle consists of a number of gene-controlled sequences that involve cyclin-dependent kinases (Cdks) and cell division control (Cdc) proteins. Cdc2L5 (cell division cycle 2-like 5), also known as CHED or CDC2L, is a member of the cyclin-dependent serine/threonine protein kinase family that plays a role in cell differentiation and apoptosis. Expressed in liver, brain and muscle, Cdc2L5 is thought to control key events in the mitotic cycle and may be involved in the development of blood cells. Due to its role in mitosis, overexpression of Cdc2L5 is implicated in the development of neuroblastoma and glioblastoma tumors, suggesting a possible role for Cdc2L5 in carcinogenesis. Cdc2L5 contains one protein kinase domain and is expressed as two different isoforms produced by alternative splicing events.

REFERENCES

1. Lapidot-Lifson, Y., et al. 1992. Cloning and antisense oligodeoxynucleotide inhibition of a human homolog of Cdc2 required in hematopoiesis. Proc. Natl. Acad. Sci. USA 89: 579-583.
2. Marqués, F., et al. 2000. A new subfamily of high molecular mass Cdc2-related kinases with PITAI/VRE motifs. Biochem. Biophys. Res. Commun. 279: 832-837.
3. Kristich, C.J., et al. 2002. *Bacillus subtilis* CheD is a chemoreceptor modification enzyme required for chemotaxis. J. Biol. Chem. 277: 25356-25362.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603309. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Even, Y., et al 2006. Cdc2L5, a Cdk-like kinase with RS domain, interacts with the ASF/SF2-associated protein p32 and affects splicing *in vivo*. J. Cell. Biochem. 99: 890-904.
6. Chen, H.H., et al. 2007. CDK13/Cdc2L5 interacts with L-type cyclins and regulates alternative splicing. Biochem. Biophys. Res. Commun. 354: 735-740.

CHROMOSOMAL LOCATION

Genetic locus: Cdk13 (mouse) mapping to 13 A2.

PRODUCT

Cdc2L5 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Cdc2L5 shRNA Plasmid (m): sc-72836-SH and Cdc2L5 shRNA (m) Lentiviral Particles: sc-72836-V as alternate gene silencing products.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Cdc2L5 siRNA (m) is recommended for the inhibition of Cdc2L5 expression in mouse 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 µM in 66 µl. 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

Cdc2L5 (ZZ08): sc-81837 is recommended as a control antibody for monitoring of Cdc2L5 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-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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cdc2L5 gene expression knockdown using RT-PCR Primer: Cdc2L5 (m)-PR: sc-72836-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Paculová, H., et al. 2017. BRCA1 or CDK12 loss sensitizes cells to CHK1 inhibitors. Tumour Biol. 39: 1010428317727479.

RESEARCH USE

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