

Cdc50A siRNA (h): sc-95079

BACKGROUND

The eukaryotic cell division cycle consists of a number of gene-controlled sequences that involve cyclin dependent kinases (Cdks) and cell division cycle (Cdc) proteins. Cdc50A (cell cycle control protein 50A), also known as TMEM30A (transmembrane protein 30A) or C6orf67, is a 361 amino acid multi-pass membrane protein that is expressed in placenta, brain and embryonic stem cells and may play a role in cell division. The gene encoding Cdc50A maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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2. Vuoristo, M.M., et al. 2004. A stop codon mutation in COL11A2 induces exon skipping and leads to non-ocular Stickler syndrome. *Am. J. Med. Genet. A* 130A: 160-164.
3. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
4. Batts, K.P. 2007. Iron overload syndromes and the liver. *Mod. Pathol.* 20: S31-S39.
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6. Safadi, S.S. and Shaw, G.S. 2007. A disease state mutation unfolds the Parkin ubiquitin-like domain. *Biochemistry* 46: 14162-14169.
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CHROMOSOMAL LOCATION

Genetic locus: TMEM30A (human) mapping to 6q14.1.

PRODUCT

Cdc50A 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 Cdc50A shRNA Plasmid (h): sc-95079-SH and Cdc50A shRNA (h) Lentiviral Particles: sc-95079-V as alternate gene silencing products.

For independent verification of Cdc50A (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-95079A, sc-95079B and sc-95079C.

RESEARCH USE

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

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

Cdc50A siRNA (h) is recommended for the inhibition of Cdc50A 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Cdc50A gene expression knockdown using RT-PCR Primer: Cdc50A (h)-PR: sc-95079-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Chen, D., et al. 2013. MicroRNA-99 family members suppress Homeobox A1 expression in epithelial cells. *PLoS ONE* 8: e80625.

PROTOCOLS

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