SANTA CRUZ BIOTECHNOLOGY, INC.

CdcA3 siRNA (h): sc-96127

BACKGROUND

Cell cycle events are regulated by the sequential activation and deactivation of cyclin dependent kinases (Cdks) and by the proteolysis of cyclins. The cell division control (Cdc) genes are required at various points in the cell cycle. CdcA3 (cell division cycle-associated protein 3), also known as TOME1 (Trigger of mitotic entry protein 1) and GRCC8 (gene-rich cluster protein C8), is a 268 amino acid cytoplasmic protein that is required for entry into mitosis. By participating with E3 ligase complexes, CdcA3 is involved in ubiquination and degradation of the mitosis-inhibitory kinase Wee 1, leading to the dephosphorylation of Cdc2 in the late G_2 phase. CdcA3 itself is targeted for destruction by anaphase promoting complex (APC) in the G_1 phase of the cell cycle, then allowing for Wee 1 accumulation during interphase.

REFERENCES

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4. Yoshida, K. 2005. Cell-cycle-dependent regulation of the human and mouse Tome-1 promoters. FEBS Lett. 579: 1488-1492.
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CHROMOSOMAL LOCATION

Genetic locus: CDCA3 (human) mapping to 12p13.31.

PRODUCT

CdcA3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CdcA3 shRNA Plasmid (h): sc-96127-SH and CdcA3 shRNA (h) Lentiviral Particles: sc-96127-V as alternate gene silencing products.

For independent verification of CdcA3 (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-96127A, sc-96127B and sc-96127C.

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 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

CdcA3 siRNA (h) is recommended for the inhibition of CdcA3 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CdcA3 gene expression knockdown using RT-PCR Primer: CdcA3 (h)-PR: sc-96127-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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