SANTA CRUZ BIOTECHNOLOGY, INC.

CDS1 siRNA (h): sc-105194

BACKGROUND

CDS1 (CDP-diacylglycerol synthase 1), also known as phosphatidate cytidyltransferase 1, is a 461 amino acid protein that belongs to the CDS family. By employing magnesium as a cofactor, CDS1 catalyzes the reaction of CTP and phosphatidate to creat diphosphate and CDP-diacylglycerol. CDP-diacylglycerol is an important precursor for the synthesis of phosphatidylinositol, cardiolipin and phosphatidylglycerol, which are ubiquitous second messengers that regulate cell growth, PKC activity and calcium metabolism. CDS1 may also be involved in the signal transduction mechanism of neural and retinal cells. Overexpression of CDS1 results in the amplification of cellular signaling responses from cytokines. Localized to the endoplasmic reticulum membrane, CDS1 is expressed in adult small intestine, ovary, testis, prostate, brain and placenta and highly expressed in fetal lung, brain and kidney.

REFERENCES

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4. Halford, S., et al. 1998. Isolation and chromosomal localization of two human CDP-diacylglycerol synthase (CDS) genes. Genomics 54: 140-144.
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7. Liu, Y., et al. 2002. Regulation of BRCA1 phosphorylation by interaction with protein phosphatase 1α. Cancer Res. 62: 6357-6361.
8. Volik, S., et al. 2006. Decoding the fine-scale structure of a breast cancer genome and transcriptome. Genome Res. 16: 394-404.

CHROMOSOMAL LOCATION

Genetic locus: CDS1 (human) mapping to 4q21.23.

PRODUCT

CDS1 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 CDS1 shRNA Plasmid (h): sc-105194-SH and CDS1 shRNA (h) Lentiviral Particles: sc-105194-V as alternate gene silencing products.

For independent verification of CDS1 (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-105194A, sc-105194B and sc-105194C.

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

CDS1 siRNA (h) is recommended for the inhibition of CDS1 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 CDS1 gene expression knockdown using RT-PCR Primer: CDS1 (h)-PR: sc-105194-PR (20 µl). 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.

PROTOCOLS

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