SANTA CRUZ BIOTECHNOLOGY, INC.

CCDC76 siRNA (m): sc-142142

BACKGROUND

CCDC76 (coiled-coil domain containing 76), also known as tRNA guanosine-2'-O-methyltransferase TRM13 homolog or tRNA [Gm4] methyltransferase, is a 481 amino acid protein belonging to the TRM13 family. Encoded by a gene that maps to human chromosome 1p21.2, CCDC76 specifically methylates guanosine-4 in various tRNAs with a Gly(CCG), His or Pro signature. CCDC76 contains one CHHC-type zinc finger and exists as two alternatively spliced isoforms. CCDC76 participates in metal ion binding and methyltransferase and transferase activities. Triggered by the suppression of hnRNP A2 in Colo16 cells, CCDC76 metabolic pathways and transcriptional responses are affected. CCDC76 is significantly regulated by 8Br-cAMP and may affect endocrine/paracrine/autocrine signals in the ovary. CCDC76 may also play a role in endometriosis.

REFERENCES

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5. Panagis, L., Zhao, X., Ge, Y., Ren, L., Mittag, T.W. and Danias, J. 2010. Gene expression changes in areas of focal loss of retinal ganglion cells in the retina of DBA/2J mice. Invest. Ophthalmol. Vis. Sci. 51: 2024-2034.
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CHROMOSOMAL LOCATION

Genetic locus: Trmt13 (mouse) mapping to 3 G1.

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.

PRODUCT

CCDC76 siRNA (m) 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 CCDC76 shRNA Plasmid (m): sc-142142-SH and CCDC76 shRNA (m) Lentiviral Particles: sc-142142-V as alternate gene silencing products.

For independent verification of CCDC76 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-142142A, sc-142142B and sc-142142C.

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

CCDC76 siRNA (m) is recommended for the inhibition of CCDC76 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CCDC76 gene expression knockdown using RT-PCR Primer: CCDC76 (m)-PR: sc-142142-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.