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SANTA CRUZ BIOTECHNOLOGY, INC.

PCDP1 siRNA (m): sc-152105

BACKGROUND

PCDP1 (primary ciliary dyskinesia protein 1), also known as MGC33657, is an 840 amino acid protein essential for ciliary and flagellar biogenesis and motility that belongs to the PCDP1 family. Encoded by a gene that maps to human chromosome 2q14.2, PCDP1 is highly conserved in chimpanzee, bovine, chicken and zebrafish. PCDP1 exists as four alternatively spliced isoforms and interacts with calmodulin in the presence of calcium. PCDP1 is expressed in ciliated respiratory epithelial cells, brain ependymal cells and spermatogenic cells, and localizes to sperm flagella and the cilia of respiratory epithelial cells and brain ependymal cells. PCDP1 may directly or indirectly regulate dynein motor force and may be a vital structural component in flagella. Loss of PCDP1 is related to hydrocephalus, male infertility and respiratory ciliary dysfunction.

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CHROMOSOMAL LOCATION

Genetic locus: Gm101 (mouse) mapping to 1 E2.3.

RESEARCH USE

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

PRODUCT

PCDP1 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 PCDP1 shRNA Plasmid (m): sc-152105-SH and PCDP1 shRNA (m) Lentiviral Particles: sc-152105-V as alternate gene silencing products.

For independent verification of PCDP1 (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-152105A, sc-152105B and sc-152105C.

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

PCDP1 siRNA (m) is recommended for the inhibition of PCDP1 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 PCDP1 gene expression knockdown using RT-PCR Primer: PCDP1 (m)-PR: sc-152105-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.