SANTA CRUZ BIOTECHNOLOGY, INC.

RSPH9 siRNA (m): sc-108405

BACKGROUND

RSPH9 (radial spoke head protein 9 homolog), also known as C6orf206 or MRPS18AL1, is a 276 amino acid protein that belongs to the flagellar radial spoke RSP9 family. RSPH9 likely functions as a part of the axonemal radial spoke head. Regularly found along the sperm, cilia and flagella axonemes, radial spokes are composed of a thin stalk attached to a bulbous head. Primary ciliary dyskinesia type 12 (CILD12) is an autosomal recessive disorder caused by defects in RSPH9. Defects in motile cilia, such as respiratory cilia, cause chronic inflammation of the respiratory system while other ciliary abnormalities cause reduced fertility in males due to defects in sperm tails. RSPH9 is alternatively spliced into two isofoms and is encoded by a gene that maps to human chromosome 6p21.1. Chromosome 6 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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CHROMOSOMAL LOCATION

Genetic locus: Rsph9 (mouse) mapping to 17 C.

PROTOCOLS

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

PRODUCT

RSPH9 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 RSPH9 shRNA Plasmid (m): sc-108405-SH and RSPH9 shRNA (m) Lentiviral Particles: sc-108405-V as alternate gene silencing products.

For independent verification of RSPH9 (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-108405A, sc-108405B and sc-108405C.

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

RSPH9 siRNA (m) is recommended for the inhibition of RSPH9 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 RSPH9 gene expression knockdown using RT-PCR Primer: RSPH9 (m)-PR: sc-108405-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.