SANTA CRUZ BIOTECHNOLOGY, INC.

Polycystin-L2 siRNA (h): sc-91892

BACKGROUND

Polycystin-L2, also known as PKD2L2 (polycystic kidney disease 2-like 2), is a 624 amino acid multi-pass membrane protein belonging to the Polycystin family. Polycystin-L2 contains six to eight transmembrane domains, two cation channel motifs and one channel pore calcium sodium motif. Although 48% identical and 67% similar to both Polycystin-2 and Polycystin-L, Polycystin-L2 does not possess putative EF-hand or coiled-coil domains. Existing as five alternatively spliced isoforms, Polycystin-L2 is expressed in testis, brain and kidney, with isoform 2 solely expressed in transformed lymphoblasts and isoform 3 ubiquitously expressed. Polycystin-L2 may function as a subunit of a cation channel and may play a role in fertilization. Overexpression of Polycystin-L2 increases the intracellular calcium concentration of MDCK cells, suggesting that Polycystin-L2 may be involved in the mid-late stage of spermatogenesis by way of intracellular calcium concentrations.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PKD2L2 (human) mapping to 5q31.2.

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

Polycystin-L2 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 Polycystin-L2 shRNA Plasmid (h): sc-91892-SH and Polycystin-L2 shRNA (h) Lentiviral Particles: sc-91892-V as alternate gene silencing products.

For independent verification of Polycystin-L2 (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-91892A, sc-91892B and sc-91892C.

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

Polycystin-L2 siRNA (h) is recommended for the inhibition of Polycystin-L2 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 Polycystin-L2 gene expression knockdown using RT-PCR Primer: Polycystin-L2 (h)-PR: sc-91892-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.