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# Polycystin-1L1 siRNA (m): sc-152383

## BACKGROUND

Polycystin-1L1, also known as PKD1L1 (polycystic kidney disease 1 like 1), PRO19563 or PC1-like 1 protein, is a 2,849 amino acid multi-pass membrane protein. Belonging to the Polycystin family, Polycystin-1L1 contains 11 transmembrane domains, one GPS domain, 2 Ig-like PKD domains, one LH2/polycystin-1, lipoxigenase,  $\alpha$ -toxin (PLAT) domain, one small receptor for egg jelly (REJ) domain and one coiled-coil domain. Encoded by a gene that maps to human chromosome 7p12.3, Polycystin-1L1 contains 58 exons and exists as 2 alternatively spliced isoforms. Polycystin-1L1 shares significant homology with all known Polycystins, and 61% sequence identity with its mouse homolog. Polycystin-1L1 is expressed in fetal and adult heart and in testis. Polycystin-1L1 is also expressed strongly in Leydig cells, a testosterone production source, and may play a role in the male reproductive system. Defects in the gene encoding Polycystin-1L1 may be associated with Polycystic kidney disease, a progressive disorder characterized by the presence of cysts in the kidneys.

## REFERENCES

1. Yuasa, T., Venugopal, B., Weremowicz, S., Morton, C.C., Guo, L. and Zhou, J. 2002. The sequence, expression, and chromosomal localization of a novel polycystic kidney disease 1-like gene, PKD1L1, in human. *Genomics* 79: 376-386.
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3. Clapham, D.E. 2003. TRP channels as cellular sensors. *Nature* 426: 517-524.
4. Lakkis, M. and Zhou, J. 2003. Molecular complexes formed with polycystins. *Nephron Exp. Nephrol.* 93: e3-e8.
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6. Yuasa, T., Takakura, A., Denker, B.M., Venugopal, B. and Zhou, J. 2004. Polycystin-1L2 is a novel G protein-binding protein. *Genomics* 84: 126-138.
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## CHROMOSOMAL LOCATION

Genetic locus: Pkd1l1 (mouse) mapping to 11 A1.

## PRODUCT

Polycystin-1L1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Polycystin-1L1 shRNA Plasmid (m): sc-152383-SH and Polycystin-1L1 shRNA (m) Lentiviral Particles: sc-152383-V as alternate gene silencing products.

For independent verification of Polycystin-1L1 (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-152383A, sc-152383B and sc-152383C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Polycystin-1L1 siRNA (m) is recommended for the inhibition of Polycystin-1L1 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  $\mu$ M in 66  $\mu$ l. 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-1L1 gene expression knockdown using RT-PCR Primer: Polycystin-1L1 (m)-PR: sc-152383-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.