SANTA CRUZ BIOTECHNOLOGY, INC.

# ANKS6 siRNA (m): sc-141121

## BACKGROUND

ANKS6 (ankyrin repeat and sterile α motif domain containing 6), also known as ankyrin repeat domain-containing protein 14, SAMD6 (sterile α motif domain-containing protein 6), SamCystin or PKDR1, is an 871 amino acid phosphoprotein that contains 11 ANK repeats, one SAM domain and exists as 3 alternatively spliced isoforms. Encoded by a gene that maps to human chromosome 9q22.33, ANKS6 is necessary for renal function and is linked to renal cyst formation in polycystic kidney disease. ANKS6 interacts with BICC1, another protein linked to polycystic kidney disease, and both co-localize to the same cell region. ANKS6 is involved in protein–protein interactions with both itself as well as BICC1, and both proteins function in a molecular pathway that is linked to cystogenesis. ANKS6 may also be associated with dental anomolies.

## REFERENCES


1. Brown, J.H., et al. 2005. Missense mutation in sterile α motif of novel protein SamCystin is associated with polycystic kidney disease in (cy/+) rat. J. Am. Soc. Nephrol. 16: 3517-3526.
2. Wu, M., et al. 2007. Everolimus retards cyst growth and preserves kidney function in a rodent model for polycystic kidney disease. Kidney Blood Press. Res. 30: 253-259.
3. Kaisaki, P.J., et al. 2008. Genomic organization and mutation screening of the human ortholog of Pkdr1 associated with polycystic kidney disease in the rat. Eur. J. Med. Genet. 51: 325-331.
4. Vieira, A.R., et al. 2008. Candidate gene/loci studies in cleft lip/palate and dental anomalies finds novel susceptibility genes for clefts. Genet. Med. 10: 668-674.
5. Stagner, E.E., et al. 2009. The polycystic kidney disease-related proteins Bicc1 and SamCystin interact. Biochem. Biophys. Res. Commun. 383: 16-21.
6. Kugita, M., et al. 2010. Global gene expression profiling in early-stage polycystic kidney disease in the Han:SPRD Cy rat identifies a role for RXR signaling. Am. J. Physiol. Renal Physiol. 300: F177-F188.


## CHROMOSOMAL LOCATION

Genetic locus: Anks6 (mouse) mapping to 4 B1.

## PRODUCT

ANKS6 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 ANKS6 shRNA Plasmid (m): sc-141121-SH and ANKS6 shRNA (m) Lentiviral Particles: sc-141121-V as alternate gene silencing products.

For independent verification of ANKS6 (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-141121A, sc-141121B and sc-141121C.

## RESEARCH USE

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

## 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

ANKS6 siRNA (m) is recommended for the inhibition of ANKS6 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.

## GENE EXPRESSION MONITORING

ANKS6 (A-1): sc-515124 is recommended as a control antibody for monitoring of ANKS6 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ANKS6 gene expression knockdown using RT-PCR Primer: ANKS6 (m)-PR: sc-141121-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.