SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD9 siRNA (m): sc-141118

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases, such as fatal cardiac arrhythmias and hereditary spherocytosis. ANKRD9 (ankyrin repeat domain 9) is a 317 amino acid protein that contains three ANK repeats. Encoded by a gene that maps to human chromosome 14q32.31, ANKRD9 is conserved in chimpanzee, canine, bovine, mouse, rat and zebrafish. Hepatic mRNA levels of ANKRD9 are repressed by both thyroid hormone (T_3) and fasting, and re-elevate by feeding after fasting. ANKRD9 mRNA levels also decrease in response to apoptosis. Localizing to cytoplasm, ANKRD9 may be involved in intracellular lipid accumulation and lipid metabolism. ANKRD9 may also function as a molecular chaperone.

REFERENCES

1. Buckanovich, R.J., et al. 2007. Tumor vascular proteins as biomarkers in ovarian cancer. J. Clin. Oncol. 25: 852-861.
2. Christensen, E.I., et al. 2008. Gene expression analysis defines the proximal tubule as the compartment for endocytic receptor-mediated uptake in the *Xenopus* pronephric kidney. Pflugers Arch. 456: 1163-1176.
3. Wang, X., et al. 2009. Regulation of ANKRD9 expression by lipid metabolic perturbations. BMB Rep. 42: 568-573.
4. Deng, Y., et al. 2010. ZNF552, a novel human KRAB/C_2H_2 zinc finger protein, inhibits AP-1- and SRE-mediated transcriptional activity. BMB Rep. 43: 193-198.
5. Deng, Y., et al. 2010. Synergistic efficacy of LBH and αB-crystallin through inhibiting transcriptional activities of p53 and p21. BMB Rep. 43: 432-437.
6. Hecker, M., et al. 2012. Network analysis of transcriptional regulation in response to intramuscular interferon-β-1a multiple sclerosis treatment. Pharmacogenomics J. 12: 134-146.
7. SWISS-PROT/TrEMBL (Q96BM1). World Wide Web URL: http://www.uniprot.org/uniprot/Q96BM1

CHROMOSOMAL LOCATION

Genetic locus: Ankrd9 (mouse) mapping to 12 F1.

PRODUCT

ANKRD9 siRNA (m) is a target-specific 19-25 nt siRNA 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 ANKRD9 shRNA Plasmid (m): sc-141118-SH and ANKRD9 shRNA (m) Lentiviral Particles: sc-141118-V as alternate gene silencing products.

PROTOCOLS

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

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

ANKRD9 siRNA (m) is recommended for the inhibition of ANKRD9 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 ANKRD9 gene expression knockdown using RT-PCR Primer: ANKRD9 (m)-PR: sc-141118-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.