SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD41 siRNA (h): sc-97867

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. ANKRD41 (ankyrin repeat domain 41), also known as ANKLE1 (ankyrin repeat and LEM (ligand-effect modulators) domain containing 1), LEM3 (LEM domain containing 3) or LEMD6 (LEM domain containing 6), is a 615 amino acid transmembrane protein that contains three ANK repeats and one LEM domain. Encoded by a gene that maps to human chromosome 19p13.11, ANKRD41 is conserved in chimpanzee, canine, bovine and mouse, and exists as two alternatively spliced isoforms. ANKRD41 is likely involved in glucocorticoid receptor pathway functions, such as nuclear localization, DNA binding, or transcriptional activation. Disruption of ANKRD41 may influence lipid transport activities.

REFERENCES

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3. Lee, K.K. and Wilson, K.L. 2004. All in the family: evidence for four new LEM-domain proteins Lem2 (NET-25), Lem3, Lem4 and Lem5 in the human genome. Symp. Soc. Exp. Biol. 329-339.
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6. Muthusamy, B.P., Natarajan, P., Zhou, X. and Graham, T.R. 2009. Linking phospholipid flippases to vesicle-mediated protein transport. Biochim. Biophys. Acta 1791: 612-619.
7. Ono, Y., Fukuda, R. and Ohta, A. 2009. Involvement of LEM3/ROS3 in the uptake of phosphatidylcholine with short acyl chains in *Saccharomyces cerevisiae.* Biosci. Biotechnol. Biochem. 73: 750-752.
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CHROMOSOMAL LOCATION

Genetic locus: ANKLE1 (human) mapping to 19p13.11.

PROTOCOLS

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

PRODUCT

ANKRD41 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 ANKRD41 shRNA Plasmid (h): sc-97867-SH and ANKRD41 shRNA (h) Lentiviral Particles: sc-97867-V as alternate gene silencing products.

For independent verification of ANKRD41 (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-97867A, sc-97867B and sc-97867C.

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

ANKRD41 siRNA (h) is recommended for the inhibition of ANKRD41 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 ANKRD41 gene expression knockdown using RT-PCR Primer: ANKRD41 (h)-PR: sc-97867-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.