SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD40 siRNA (m): sc-141099

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. ANKRD40 (ankyrin repeat domain 40) is a 368 amino acid protein that contains two ANK repeats. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, ANKRD40 may play a role in cell adhesion and migration. ANKRD40 is encoded by a gene that maps to human chromosome 17q21.32. Chromosome 17 makes up over 2.5% of the human genome and contains about 81 million bases, which encode over 1,200 genes. Chromosome 17 is linked to neurofibromatosis, a condition characterized by neural and epidermal lesions and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dubé syndrome and Canavan disease are also associated with chromosome 17.

REFERENCES

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2. Al-Dirbashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. J. Inherit. Metab. Dis. 30: 612.
3. Murakami, N., et al. 2008. Novel deletion mutation in GFAP gene in an infantile form of Alexander disease. Pediatr. Neurol. 38: 50-52.
4. Ernst, W.L., et al. 2009. Genetic enhancement of thalamocortical network activity by elevating α 1γ-mediated low-voltage-activated calcium current induces pure absence epilepsy. J. Neurosci. 29: 1615-1625.
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7. Ray, A., et al. 2010. Dose-related gene expression changes in forebrain following acute, low-level chlorpyrifos exposure in neonatal rats. Toxicol. Appl. Pharmacol. 248: 144-155.
8. SWISS-PROT/TrEMBL (Q6AI12). World Wide Web URL: http://www.uniprot.org/uniprot/Q6AI12

CHROMOSOMAL LOCATION

Genetic locus: Ankrd40 (mouse) mapping to 11 D.

PRODUCT

ANKRD40 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 ANKRD40 shRNA Plasmid (m): sc-141099-SH and ANKRD40 shRNA (m) Lentiviral Particles: sc-141099-V as alternate gene silencing 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

ANKRD40 siRNA (m) is recommended for the inhibition of ANKRD40 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 ANKRD40 gene expression knockdown using RT-PCR Primer: ANKRD40 (m)-PR: sc-141099-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.

PROTOCOLS

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