

ANKRD60 siRNA (m): sc-141117

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. ANKRD60 (ankyrin repeat domain 60) is a 345 amino acid protein that is conserved in canine, bovine, mouse, rat and chicken. Containing two ANK repeats and one ubiquitin-like domain, ANKRD60 is linked to human height and may be involved in human growth and development. ANKRD60 is encoded by a gene that maps to human chromosome 20, which represents 2% of human DNA and consists of approximately 63 million bases encoding 600 genes. Chromosome 20 contains a region of numerous genes that are expressed in the epididymis and may be important for seminal production and male contraception. Human transmissible spongiform encephalopathies, Amyotrophic lateral sclerosis, spinal muscular atrophy, RING chromosome 20 epilepsy syndrome and Alagille syndrome are associated with chromosome 20.

REFERENCES

1. Masullo, C. and Macchi, G. 2001. Does PRNP gene control the clinical and pathological phenotype of human spongiform transmissible encephalopathies? *Clin. Neuropathol.* 20: 19-25.
2. Collins, S., McLean, C.A. and Masters, C.L. 2001. Gerstmann-Sträussler-Scheinker syndrome, fatal familial insomnia, and kuru: a review of these less common human transmissible spongiform encephalopathies. *J. Clin. Neurosci.* 8: 387-397.
3. Ville, D., Kaminska, A., Bahi-Buisson, N., Biraben, A., Plouin, P., Telvi, L., Dulac, O. and Chiron, C. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.
4. Joó, J.G., Beke, A., Tóth-Pál, E., Hargitai, B., Szigeti, Z., Papp, C. and Papp, Z. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. *J. Reprod. Med.* 51: 209-212.
5. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. *Asian J. Androl.* 9: 540-544.
6. Elghezal, H., Hannachi, H., Mougou, S., Kammoun, H., Triki, C. and Saad, A. 2007. RING chromosome 20 syndrome without deletions of the subtelomeric and CHRNA4—KCNQ2 genes loci. *Eur. J. Med. Genet.* 50: 441-445.
7. O'Rand, M.G., Widgren, E.E., Wang, Z. and Richardson, R.T. 2007. Eppin: an epididymal protease inhibitor and a target for male contraception. *Soc. Reprod. Fertil. Suppl.* 63: 445-453.
8. Kim, J.J., Lee, H.I., Park, T., Kim, K., Lee, J.E., Cho, N.H., Shin, C., Cho, Y.S., Lee, J.Y., Han, B.G., Yoo, H.W. and Lee, J.K. 2010. Identification of 15 loci influencing height in a Korean population. *J. Hum. Genet.* 55: 27-31.
9. SWISS-PROT/TrEMBL (Q9BZ19). World Wide Web URL: <http://www.uniprot.org/uniprot/Q9BZ19>

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Ankrd60 (mouse) mapping to 2 H4.

PRODUCT

ANKRD60 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ANKRD60 shRNA Plasmid (m): sc-141117-SH and ANKRD60 shRNA (m) Lentiviral Particles: sc-141117-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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ANKRD60 siRNA (m) is recommended for the inhibition of ANKRD60 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 μ M in 66 μ 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 ANKRD60 gene expression knockdown using RT-PCR Primer: ANKRD60 (m)-PR: sc-141117-PR (20 μ 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.