

ANKRD56 siRNA (h): sc-89009

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. ANKRD56 (ankyrin repeat domain 56) is a 793 amino acid protein that contains two ANK repeats. Conserved in bovine, mouse, rat and chicken, ANKRD56 is encoded by a gene that maps to human chromosome 4, which represents approximately 6% of the human genome and contains nearly 900 genes. Notably, the Huntington gene, which encodes an expanded glutamine tract in cases of Huntington's disease, is located on chromosome 4. FGFR-3 is also encoded by a gene that maps to human chromosome 4 and is associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also linked to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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2. Chandler, R.J., et al. 2007. Metabolic phenotype of methylmalonic acidemia in mice and humans: the role of skeletal muscle. *BMC Med. Genet.* 8: 64.
3. de Frutos, C.A., et al. 2007. Snail1 is a transcriptional effector of FGFR-3 signaling during chondrogenesis and achondroplasias. *Dev. Cell* 13: 872-883.
4. Ruiz-Perez, V.L., et al. 2007. EVC is a positive mediator of Ihh-regulated bone growth that localises at the base of chondrocyte cilia. *Development* 134: 2903-2912.
5. Shin, J.W., et al. 2008. Effect of leukapheresis on gene expression profiles of donor's peripheral blood mononuclear cells. *Korean J. Lab. Med.* 28: 130-135.
6. Silva, G.L., et al. 2009. Genetic susceptibility loci in rheumatoid arthritis establish transcriptional regulatory networks with other genes. *Ann. N.Y. Acad. Sci.* 1173: 521-537.
7. SWISS-PROT/TrEMBL (A6NEL2). World Wide Web URL: <http://www.uniprot.org/uniprot/A6NEL2>

CHROMOSOMAL LOCATION

Genetic locus: SOWAHB (human) mapping to 4q21.1.

PRODUCT

ANKRD56 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ANKRD56 shRNA Plasmid (h): sc-89009-SH and ANKRD56 shRNA (h) Lentiviral Particles: sc-89009-V as alternate gene silencing products.

For independent verification of ANKRD56 (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-89009A, sc-89009B and sc-89009C.

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

ANKRD56 siRNA (h) is recommended for the inhibition of ANKRD56 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 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 ANKRD56 gene expression knockdown using RT-PCR Primer: ANKRD56 (h)-PR: sc-89009-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.

PROTOCOLS

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