

ANKRD55 siRNA (h): sc-92041

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. ANKRD55 (ankyrin repeat domain 55) is a 613 amino acid protein that contains nine ANK repeats and exists as three alternatively spliced isoforms. Conserved in chimpanzee, canine, mouse, rat and zebrafish, ANKRD55 may play a role in cellular signaling. ANKRD55 is encoded by a gene that maps to human chromosome 5, which makes up approximately 6% of the human genome and contains 181 million base pairs encoding 1,000 genes. Chromosome 5 is associated with Cockayne syndrome, familial adenomatous polyposis and Treacher Collins syndrome. Deletion of 5q, or chromosome 5 altogether, is common in acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

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4. Cleaver, J.E., et al. 2007. Cockayne syndrome exhibits dysregulation of p21 and other gene products that may be independent of transcription-coupled repair. *Neuroscience* 145: 1300-1308.
5. Mullighan, C.G., et al. 2008. Genomic analysis of the clonal origins of relapsed acute lymphoblastic leukemia. *Science* 322: 1377-1380.
6. Gao, T., et al. 2009. The ankyrin repeat domain of Huntingtin interacting protein 14 contains a surface aromatic cage, a potential site for methyl-lysine binding. *Proteins* 76: 772-777.
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CHROMOSOMAL LOCATION

Genetic locus: ANKRD55 (human) mapping to 5q11.2.

PRODUCT

ANKRD55 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 ANKRD55 shRNA Plasmid (h): sc-92041-SH and ANKRD55 shRNA (h) Lentiviral Particles: sc-92041-V as alternate gene silencing products.

For independent verification of ANKRD55 (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-92041A, sc-92041B and sc-92041C.

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

ANKRD55 siRNA (h) is recommended for the inhibition of ANKRD55 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 ANKRD55 gene expression knockdown using RT-PCR Primer: ANKRD55 (h)-PR: sc-92041-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.