SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD52 siRNA (h): sc-106806

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. ANKRD52 (ankyrin repeat domain 52), also known as PP6-ARS-C (serine/threonine-protein phosphatase 6 regulatory ankyrin repeat subunit C), is a 1,076 amino acid phosphoprotein that contains twenty-eight ANK repeats. Encoded by a gene that maps to human chromosome 12q13.2, ANKRD52 is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish. ANKRD52 is a putative regulatory subunit of protein phospatase 6 (PP6), a holoenzyme that may be a heterotrimeric complex formed by a catalytic subunit, a SKAP55 domain-containing subunit (PP6R) and an ankyrin repeat-domain containing regulatory subunit (ARS). ANKRD52 may also be involved in phosphoprotein substrate recognition.

REFERENCES

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2. Stefansson, B., et al. 2008. Protein phosphatase 6 regulatory subunits composed of ankyrin repeat domains. Biochemistry 47: 1442-1451.
3. Howarth, K.D., et al. 2008. Array painting reveals a high frequency of balanced translocations in breast cancer cell lines that break in cancer-relevant genes. Oncogene 27: 3345-3359.
4. Guergnon, J., et al. 2009. Mapping of protein phosphatase-6 association with its SAPS domain regulatory subunit using a model of helical repeats. BMC Biochem. 10: 24.
5. Ahmed, F.E., et al. 2009. Diagnostic microRNA markers for screening sporadic human colon cancer and active ulcerative colitis in stool and tissue. Cancer Genomics Proteomics 6: 281-295.
6. Faghihi, M.A., et al. 2010. RNAi screen indicates widespread biological function for human natural antisense transcripts. PLoS ONE 5 pii: e13177.
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CHROMOSOMAL LOCATION

Genetic locus: ANKRD52 (human) mapping to 12q13.2.

PRODUCT

ANKRD52 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 ANKRD52 shRNA Plasmid (h): sc-106806-SH and ANKRD52 shRNA (h) Lentiviral Particles: sc-106806-V as alternate gene silencing products.

For independent verification of ANKRD52 (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-106806A, sc-106806B and sc-106806C.

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

ANKRD52 siRNA (h) is recommended for the inhibition of ANKRD52 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.

GENE EXPRESSION MONITORING

ANKRD52 (A-1): sc-398544 is recommended as a control antibody for monitoring of ANKRD52 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ANKRD52 gene expression knockdown using RT-PCR Primer: ANKRD52 (h)-PR: sc-106806-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.