SANTA CRUZ BIOTECHNOLOGY, INC.

FOXD4 siRNA (h): sc-92938

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The Power to Question

BACKGROUND

Comprised of at least 43 members, the FOX family is a large group of proteins that share a common DNA binding domain termed winged-helix or forkhead domain. FOX transcription factors play important roles in development, differentiation, aging and hormone responsiveness. FOXD4 (forkhead box D4), also known as FKHL9, FOXD4A, FREAC5 (forkhead-related transcription factor 5) or myeloid factor-α, is a 495 amino acid nuclear protein that contains one fork-head DNA-binding domain and is a member of the FOX family of transcriptional regulators. The fork-head DNA-binding domain is highly conserved across the FOX family and across species. Mutations in the gene encoding FOXD4 is suggested to be associated with dilated cardiomyopathy, obsessive-compulsive disorder and suicidality. The gene encoding FOXD4 is located on human chromosome 9p24.3, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: FOXD4 (human) mapping to 9p24.3.

PRODUCT

FOXD4 siRNA (h) 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 FOXD4 shRNA Plasmid (h): sc-92938-SH and FOXD4 shRNA (h) Lentiviral Particles: sc-92938-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

FOXD4 siRNA (h) is recommended for the inhibition of FOXD4 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FOXD4 gene expression knockdown using RT-PCR Primer: FOXD4 (h)-PR: sc-92938-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.