SANTA CRUZ BIOTECHNOLOGY, INC.

ACTL7A siRNA (h): sc-92832

BACKGROUND

ACTL7A (Actin-like 7A) is a member of the ARP family of Actin-related proteins that contain an Actin fold and are involved in spindle orientation, nuclear migration and chromatin remodeling events. Localized to cytoplasm and strongly expressed in testis, ACTL7A is 435 amino acids in length and is encoded by a gene that is oriented in a head-to-head formation with the familial dysautonomia (FD) candidate region on chromosome 9. Although located in a region associated with FD, ACTL7A is not involved in the pathogenesis of the genetic disease. ACTL7A shares high sequence similarity with ACTL7B (Actin-like 7B) and contains several conserved protein kinase C (PKC) sites, one conserved cAMP/cGMP-dependent phosphorylation site and one leucine zipper consensus sequence. Human and mouse ACTL7A share 86% sequence similarity.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ACTL7A (human) mapping to 9q31.3.

PRODUCT

ACTL7A 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 ACTL7A shRNA Plasmid (h): sc-92832-SH and ACTL7A shRNA (h) Lentiviral Particles: sc-92832-V as alternate gene silencing products.

For independent verification of ACTL7A (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-92832A, sc-92832B and sc-92832C.

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

ACTL7A siRNA (h) is recommended for the inhibition of ACTL7A 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 ACTL7A gene expression knockdown using RT-PCR Primer: ACTL7A (h)-PR: sc-92832-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.