SANTA CRUZ BIOTECHNOLOGY, INC.

TDRD7 siRNA (h): sc-92710

BACKGROUND

TDRD7 (tudor domain containing 7), also known as TRAP, CATC4 or PCTAIRE2BP, is a 1,098 amino acid cytoplasmic protein that localizes to RNA granules. TDRD7 is present in the chromatoid body (CB) of spermatids and is detected in the intermitochondrial cementin of pachytene spermatocytes. TDRD7 contains three lotus/OST-HTH domains and two tudor domains, and forms a mRNP complex with TDRD1, TDRD6 and VASA. TDRD7 is a component of cytoplasmic RNA granules involved in post-transcriptional regulation of specific genes. Required for lens transparency during lens development, TDRD7 is also required during spermatogenesis. Mutations in the gene encoding TDRD7 leads to cataract congenital autosomal recessive type 4 (CATC4), which is characterized by an opacification of the crystalline lens of the eye. TDRD7 exists as three alternatively spliced isoforms and is encoded by a gene located on human chromosome 9q22.33.

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CHROMOSOMAL LOCATION

Genetic locus: TDRD7 (human) mapping to 9q22.33.

PRODUCT

TDRD7 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 TDRD7 shRNA Plasmid (h): sc-92710-SH and TDRD7 shRNA (h) Lentiviral Particles: sc-92710-V as alternate gene silencing products.

For independent verification of TDRD7 (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-92710A, sc-92710B and sc-92710C.

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

TDRD7 siRNA (h) is recommended for the inhibition of TDRD7 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 TDRD7 gene expression knockdown using RT-PCR Primer: TDRD7 (h)-PR: sc-92710-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.