SANTA CRUZ BIOTECHNOLOGY, INC.

Odf3 siRNA (h): sc-97010

BACKGROUND

Constituting the main cytoskeletal structure of spermatid flagella, outer dense fibers (ODFs) add elastic recoil, stiffness and protection against shear forces during sperm movement. Human ODFs consist of approximately 10 major and at least 15 minor proteins. The major proteins of the ODF include Odf1, Odf2, and Odf3, which compose a family of proteins that are preferentially expressed during mammalian spermiogenesis. Odf3 (outer dense fiber protein 3), also known as sperm tail protein SHIPPO 1 and TISP50 (transcript induced in spermiogenesis protein 50), is a 254 amino acid protein that is expressed during the latter part of spermatogenesis in flagella of elongated spermatids and mature sperm. Odf proteins are directed to their exact subcellular location by Spags, which are characterized as chaperone-like Odf-binding molecules. There are two isoforms of Odf3 that are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ODF3 (human) mapping to 11p15.5.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Odf3 siRNA (h) is a pool of 2 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 Odf3 shRNA Plasmid (h): sc-97010-SH and Odf3 shRNA (h) Lentiviral Particles: sc-97010-V as alternate gene silencing products.

For independent verification of Odf3 (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-97010A and sc-97010B.

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

Odf3 siRNA (h) is recommended for the inhibition of Odf3 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 Odf3 gene expression knockdown using RT-PCR Primer: Odf3 (h)-PR: sc-97010-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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