

Sptrx-3 siRNA (h): sc-92636

BACKGROUND

Sptrx-3 (spermatid-specific thioredoxin-3), also known as TRX6 (thioredoxin-6) or TXNDC8 (thioredoxin domain-containing protein 8), is a 127 amino acid protein that belongs to the thioredoxin family and contains one thioredoxin domain. Localizing to the cytoplasm and Golgi apparatus in testis, Sptrx-3 may be required for post-translational modifications of proteins required for acrosomal biogenesis and may also reduce disulfide bonds within the sperm. Sptrx-3 is only expressed during spermiogenesis, prominently in the Golgi apparatus of pachytene spermatocytes and round and elongated spermatids, with a transient localization in the developing acrosome of round spermatids. The Sptrx-3 gene contains 34,327 bases, encodes 2 alternatively spliced isoforms and maps to human chromosome 9q31.3. Human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome, is associated with hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TXNDC8 (human) mapping to 9q31.3.

PROTOCOLS

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

PRODUCT

Sptrx-3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sptrx-3 shRNA Plasmid (h): sc-92636-SH and Sptrx-3 shRNA (h) Lentiviral Particles: sc-92636-V as alternate gene silencing products.

For independent verification of Sptrx-3 (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-92636A and sc-92636B.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Sptrx-3 siRNA (h) is recommended for the inhibition of Sptrx-3 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 μ M in 66 μ l. 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 Sptrx-3 gene expression knockdown using RT-PCR Primer: Sptrx-3 (h)-PR: sc-92636-PR (20 μ l). 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.