

TSPY siRNA (h): sc-91547

BACKGROUND

Testis-specific protein Y-encoded (TSPY) is the product of a tandem gene cluster on the human proximal Yp gene. TSPY genes have been conserved and maintained on the mammalian Y chromosome since before the radiation of eutheria, 80 million years ago. TSPY functions as an important factor in cell cycle progression, cell proliferation and tumorigenesis. TSPY may participate in the oncogenesis of gonadoblastoma expression and a variety of other tumor tissues, including testicular germ cell tumors, prostate cancer, melanoma and liver cancer. The Sox family of proteins regulate the expression of TSPY, and its activity is phosphorylation dependent. TSPY may be a potential candidate in vaccine strategy for immunotherapy in hepatocellular carcinoma patients.

REFERENCES

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5. Schubert, S., et al. 2003. Generation and characterization of TSPY. *Biol. Reprod.* 69: 968-975.
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8. Yin, Y.H., et al. 2005. TSPY is a cancer testis antigen expressed in human hepatocellular carcinoma. *Br. J. Cancer* 93: 458-463.
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CHROMOSOMAL LOCATION

Genetic locus: TSPY1 (human) mapping to Yp11.2.

PRODUCT

TSPY 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 TSPY shRNA Plasmid (h): sc-91547-SH and TSPY shRNA (h) Lentiviral Particles: sc-91547-V as alternate gene silencing products.

For independent verification of TSPY (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-91547A and sc-91547B.

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

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

GENE EXPRESSION MONITORING

TSPY (H-11): sc-137050 is recommended as a control antibody for monitoring of TSPY gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TSPY gene expression knockdown using RT-PCR Primer: TSPY (h)-PR: sc-91547-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.

PROTOCOLS

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