SANTA CRUZ BIOTECHNOLOGY, INC.

SPATA9 siRNA (h): sc-91922

BACKGROUND

SPATA9 (spermatogenesis associated 9), also known as NYD-SP16, is a 254 amino acid single-pass membrane protein that is highly expressed in testis and pancreas with low expression in heart, lung, and brain. A component of the sperm acrosome, SPATA9 may participate in sperm capacitation and acrosome reaction, and is therefore necessary for fertilization. SPATA9 is also suggested to be involved in testicular development/spermatogenesis and may be an important factor in male infertility. No expression of SPATA9 was found in patients affected by Sertoli-cell-only syndrome, also known as Del Castillo syndrome or germ cell aplasia, which is characterized by male sterility without sexual abnormality. SPATA9 is encoded by a gene located on human chromosome 5, which consists of about 181 million base pairs, encodes around 1,000 genes and represents about 6% of human genomic DNA.

REFERENCES

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6. Lu, Y., Huo, R., Yuan, Y., Li, J., Shi and Q., Sha, J. 2006. Human testicular protein NYD-SP16 is involved in sperm capacitation and the acrosome reaction. Fertil. Steril. 86: 1228-1234.

CHROMOSOMAL LOCATION

Genetic locus: SPATA9 (human) mapping to 5q15.

PRODUCT

SPATA9 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 SPATA9 shRNA Plasmid (h): sc-91922-SH and SPATA9 shRNA (h) Lentiviral Particles: sc-91922-V as alternate gene silencing products.

For independent verification of SPATA9 (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-91922A, sc-91922B and sc-91922C.

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

SPATA9 siRNA (h) is recommended for the inhibition of SPATA9 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.

GENE EXPRESSION MONITORING

SPATA9 (F-6): sc-515442 is recommended as a control antibody for monitoring of SPATA9 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 SPATA9 gene expression knockdown using RT-PCR Primer: SPATA9 (h)-PR: sc-91922-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.