SANTA CRUZ BIOTECHNOLOGY, INC.

PRSS50 siRNA (m): sc-61731

BACKGROUND

Testis-specific protease 50 (TSP50) is a 385 amino acid protein that is only expressed in the nucleus and cytoplasm of spermatocytes, but not in mature sperm of testis or in malignant mammary epithelial cells. TSP50 is similar in enzymatic structure to many serine proteases, however, in the most critical catalytic triad, the serine has been replaced by a threonine. This unique structure of TSP50 indicates that it may have a specialized substrate. TSP50 is usually methylated, but expression of the abnormally hypomethylated form of TSP50 may lead to breast and ovarian cancer. This suggests that while the normal function of TSP50 is to play a role in spermatogenesis and human regeneration, the upregulation or hypomethylation of TSP50 may be oncogenic.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Prss50 (mouse) mapping to 9 F3.

PROTOCOLS

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

PRODUCT

PRSS50 siRNA (m) 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 PRSS50 shRNA Plasmid (m): sc-61731-SH and PRSS50 shRNA (m) Lentiviral Particles: sc-61731-V as alternate gene silencing products.

For independent verification of PRSS50 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61731A, sc-61731B and sc-61731C.

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

PRSS50 siRNA (m) is recommended for the inhibition of PRSS50 expression in mouse 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

PRSS50 (DD-4): sc-80412 is recommended as a control antibody for monitoring of PRSS50 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PRSS50 gene expression knockdown using RT-PCR Primer: PRSS50 (m)-PR: sc-61731-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.