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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

SPESP1 siRNA (m): sc-153751

BACKGROUND

SPESP1 (sperm equatorial segment protein 1) is a 399 amino acid protein belonging to the SPESP1 family. Localizing to cytoplasmic vesicle, secretory vesicle, and acrosome, SPESP1 is highly expressed in testis, with lower levels found in placenta and fetal lung. SPESP1 establishes an equatorial segment subcompartment early in sperm development and is required for proper sperm-egg fusion. Disruption of SPESP1 leads to abnormal distribution of sperm proteins resulting in a detached membrane from the equatorial segment and less fertile sperm. SPESP1 may interact with IZUMO1 and MN9 antigen and contains an N-glycosylation site as well as several cAMP-dependent kinase, protein kinase C, and casein kinase II consensus phosphorylation sites.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Spesp1 (mouse) mapping to 9 B.

PROTOCOLS

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

PRODUCT

SPESP1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPESP1 shRNA Plasmid (m): sc-153751-SH and SPESP1 shRNA (m) Lentiviral Particles: sc-153751-V as alternate gene silencing products.

For independent verification of SPESP1 (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-153751A, sc-153751B and sc-153751C.

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

SPESP1 siRNA (m) is recommended for the inhibition of SPESP1 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 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 SPESP1 gene expression knockdown using RT-PCR Primer: SPESP1 (m)-PR: sc-153751-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.