SANTA CRUZ BIOTECHNOLOGY, INC.

TSARG4 siRNA (m): sc-63168

BACKGROUND

TSARG4 (testis and spermatogenesis-related gene 4 protein), also known as SPAG4L (sperm-associated antigen 4-like protein) or SRG4 (spermatogenesis-related gene 4) in mice, is a ubiquitously expressed protein in humans, but in mice it is specifically expressed in the testis. TSARG4 belongs to the spindle pole body family of proteins and contains one UNC84/SUN domain and a potential transmembrane region. The human TSARG4 protein shares 74% amino acid identity with its mouse counterpart. In mice, TSARG4 is found in round spermatids and spermatocytes and may participate in mitosis. It has been hypothesized that TSARG4 localizes to the nuclear envelope.

REFERENCES

1. Jiang, Y., et al. 1999. A role for GATA-4/5/6 in the regulation of Nkx2.5 expression with implications for patterning of the precardiac field. Dev. Biol. 216: 57-71.
2. Liu, G., et al. 2003. Molecular cloning of TSARG3 gene related to apoptosis in human spermatogenic cells. Zhonghua Yi Xue Yi Chuan Xue Za Zhi 20: 107-110.
3. Xing, X.W., et al. 2003. Cloning of cDNA of TSARG4, a human spermatogenesis related gene. Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao 35: 283-288.
4. Xing, X.W., et al. 2004. Cloning of cDNA of SRG4, a mouse spermatogenesis related gene and expression in mouse different developing stages. Yi Chuan Xue Bao 31: 1066-1071.
5. Liu, G., et al. 2004. Molecular cloning of TSARG6 gene related to apoptosis in human spermatogenic cells. Acta Biochim. Biophys. Sin. 36: 93-98.
6. Xing, X.W., et al. 2004. Identification of a novel gene SRG4 expressed at specific stages of mouse spermatogenesis. Acta Biochim. Biophys. Sin. 36: 351-359.
7. Xing, X.W., et al. 2007. Prokaryotic expression and purification of SRG4, a novel mouse spermatogenesis gene. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 23: 701-703.

CHROMOSOMAL LOCATION

Genetic locus: Sun5 (mouse) mapping to 2 H1.

PRODUCT

TSARG4 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 TSARG4 shRNA Plasmid (m): sc-63168-SH and TSARG4 shRNA (m) Lentiviral Particles: sc-63168-V as alternate gene silencing products.

For independent verification of TSARG4 (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-63168A, sc-63168B and sc-63168C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

TSARG4 siRNA (m) is recommended for the inhibition of TSARG4 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 60 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TSARG4 gene expression knockdown using RT-PCR Primer: TSARG4 (m)-PR: sc-63168-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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