

Tcam1 siRNA (m): sc-154128

BACKGROUND

Tcam1 (testicular cell adhesion molecule 1) is a 548 amino acid protein expressed primarily in testis. Evolutionarily conserved in most mammalian species, Tcam1 localizes to cell membranes of spermatocytes and weakly localizes to round spermatids. Tcam1 is thought to interact with a receptor on Sertoli cells, and thereby assists in germ cell and Sertoli cell interactions. Containing seven signal sequence domains, five immunoglobulin (Ig) domains, as well as transmembrane and cytoplasmic domains, Tcam1 is encoded by a gene that maps to murine chromosome 11 E1. Tcam1 knockout mice have been observed to be fertile and have normal sperm count, therefore, Tcam1 does not appear to be required for male fertility.

REFERENCES

1. Ono, M., et al. 1999. Gene structure of rat testicular cell adhesion molecule 1 (TCAM-1), and its physical linkage to genes coding for the growth hormone and BAF60b, a component of SWI/SNF complexes. *Gene* 226: 95-102.
2. Sakatani, S., et al. 2000. Structure, expression, and conserved physical linkage of mouse testicular cell adhesion molecule-1 (TCAM-1) gene. *Genome* 43: 957-962.
3. Carninci, P., et al. 2000. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. *Genome Res.* 10: 1617-1630.
4. Zambrowicz, B.P., et al. 2003. Wnk1 kinase deficiency lowers blood pressure in mice: a gene-trap screen to identify potential targets for therapeutic intervention. *Proc. Natl. Acad. Sci. USA* 100: 14109-14114.
5. Wang, R.S., et al. 2009. Androgen receptor roles in spermatogenesis and fertility: lessons from testicular cell-specific androgen receptor knockout mice. *Endocr. Rev.* 30: 119-132.
6. Nalam, R.L., et al. 2010. Testicular cell adhesion molecule 1 (TCAM1) is not essential for fertility. *Mol. Cell. Endocrinol.* 315: 246-253.

CHROMOSOMAL LOCATION

Genetic locus: Tcam1 (mouse) mapping to 11 E1.

PRODUCT

Tcam1 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 Tcam1 shRNA Plasmid (m): sc-154128-SH and Tcam1 shRNA (m) Lentiviral Particles: sc-154128-V as alternate gene silencing products.

For independent verification of Tcam1 (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-154128A, sc-154128B and sc-154128C.

PROTOCOLS

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

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

Tcam1 siRNA (m) is recommended for the inhibition of Tcam1 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 Tcam1 gene expression knockdown using RT-PCR Primer: Tcam1 (m)-PR: sc-154128-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.