



TSSK 2 siRNA (m): sc-154741

BACKGROUND

TSSK 2 (testis-specific serine kinase 2), also known as DGS-G (DiGeorge syndrome protein G), SPOGA2 or STK22B (serine/threonine-protein kinase 22B), is a testis-specific serine/threonine kinase that belongs to the CAMK serine/threonine-protein kinase family. Localizing to the cytoplasm, TSSK 2 contains one protein kinase domain and is believed to play a role in the late stages of spermatogenesis. TSSK 2 shares 83% amino acid identity with the related protein kinase TSSK 1. Specifically, TSSK 2 uses magnesium as a cofactor and catalyzes the transfer of a phosphate from ATP to a target protein, such as SPAG16. Loss of TSSK 2 due to chromosomal deletion has been implicated in velocardiofacial/DiGeorge syndrome (VCFS/DGS), a disorder of development that is characterized by palate anomalies, facial anomalies, immunodeficiency, conotruncal cardiac malformations and hypocalcemia.

REFERENCES

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4. Hao, Z., et al. 2004. Expression analysis of the human testis-specific serine/threonine kinase (TSSK) homologues. A TSSK member is present in the equatorial segment of human sperm. *Mol. Hum. Reprod.* 10: 433-444.
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6. Zeng, M., et al. 2008. DAZL binds to the transcripts of several Tssk genes in germ cells. *BMB Rep.* 41: 300-304.
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CHROMOSOMAL LOCATION

Genetic locus: Tssk2 (mouse) mapping to 16 A3.

PRODUCT

TSSK 2 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 TSSK 2 shRNA Plasmid (m): sc-154741-SH and TSSK 2 shRNA (m) Lentiviral Particles: sc-154741-V as alternate gene silencing products.

For independent verification of TSSK 2 (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-154741A, sc-154741B and sc-154741C.

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

TSSK 2 siRNA (m) is recommended for the inhibition of TSSK 2 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 TSSK 2 gene expression knockdown using RT-PCR Primer: TSSK 2 (m)-PR: sc-154741-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.

PROTOCOLS

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