SANTA CRUZ BIOTECHNOLOGY, INC.

TBX1 siRNA (m): sc-38468

BACKGROUND

Members of the T-box (Tbx) gene family share a conserved domain that codes for the T-box, a sequence involved in DNA-binding and protein dimerization. The Tbx gene family is largely conserved throughout metazoan evolution, and is implicated in a variety of developmental processes ranging from the formation of germ layers to the organizational patterning of the central nervous system. Both Tbx1 and retinoic acid (RA) are key players in embryonic pharyngeal development. The human genes TBX1 and TBX5 are mutated in cardiac congenital anomaly syndromes. In addition, TBX1 is the major candidate gene for del22q11.2 (DiGeorge or velo-cardio-facial) syndrome, characterized by craniofacial defects, thymic hypoplasia, cardiovascular anomalies, velopharyngeal insufficiency and skeletal muscle hypotonia.

REFERENCES

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7. Stennard, F.A., et al. 2005. T-box transcription factors and their roles in regulatory hierarchies in the developing heart. Development 132: 4897-4910.
8. Baldini, A., et al. 2005. Dissecting contiguous gene defects: TBX1. Curr. Opin. Genet. Dev. 15: 279-284.
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CHROMOSOMAL LOCATION

Genetic locus: Tbx1 (mouse) mapping to 16 A3.

PRODUCT

TBX1 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 TBX1 shRNA Plasmid (m): sc-38468-SH and TBX1 shRNA (m) Lentiviral Particles: sc-38468-V as alternate gene silencing products.

For independent verification of TBX1 (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-38468A, sc-38468B and sc-38468C.

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

TBX1 siRNA (m) is recommended for the inhibition of TBX1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TBX1 gene expression knockdown using RT-PCR Primer: TBX1 (m)-PR: sc-38468-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.

PROTOCOLS

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