



## TBX20 siRNA (m): sc-38484

### 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. The T-box family member human TBX20 shares approximately 71% sequence identity with the T-box domain of the *Drosophila* H15 protein. The human TBX20 gene contains six exons spanning 22 kb of genomic DNA and encodes a deduced 297-amino acid protein, which is expressed in the fetal heart, eye and limb. During embryogenesis in the mouse, TBX20 is expressed in the developing heart, eye, ventral neural tube, and limbs, indicating a possible role in regulating development of these tissues.

### REFERENCES

1. Agulnik, S.I., et al. 1998. Cloning, mapping, and expression analysis of TBX15, a new member of the T-box gene family. *Genomics* 51: 68-75.
2. He, M.I., et al. 1999. Transcription repression by *Xenopus* ET and its human ortholog TBX3, a gene involved in ulnar-mammary syndrome. *Proc. Natl. Acad. Sci. USA* 96: 10212-10217.
3. Begemann, G., et al. 2000. Developmental regulation of Tbx5 in zebrafish embryogenesis. *Mech. Dev.* 90: 299-304.
4. Ahn, D.G., et al. 2000. Tbx20, a new vertebrate T-box gene expressed in the cranial motor neurons and developing cardiovascular structures in zebrafish. *Mech. Dev.* 95: 253-258.
5. Meins, M., et al. 2000. Characterization of the human TBX20 gene, a new member of the T-box gene family closely related to the *Drosophila* H15 gene. *Genomics* 67: 317-322.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606061. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

### CHROMOSOMAL LOCATION

Genetic locus: Tbx20 (mouse) mapping to 9 A4.

### PRODUCT

TBX20 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TBX20 shRNA Plasmid (m): sc-38484-SH and TBX20 shRNA (m) Lentiviral Particles: sc-38484-V as alternate gene silencing products.

For independent verification of TBX20 (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-38484A, sc-38484B and sc-38484C.

### PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

TBX20 siRNA (m) is recommended for the inhibition of TBX20 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  $\mu$ M in 66  $\mu$ 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 TBX20 gene expression knockdown using RT-PCR Primer: TBX20 (m)-PR: sc-38484-PR (20  $\mu$ l, 438 bp). 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.