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SANTA CRUZ BIOTECHNOLOGY, INC.

TCP-10b siRNA (m): sc-154141

BACKGROUND

The mouse t complex influences embryonic development, male transmission ratio and male fertility, as well as a few other traits. Male sterility and embryonic lethality in mice are caused by recessive mutations in t haplotypes. The transmission ratio distortion (TRD) plays a central role in maintaining these deleterious genes, which would otherwise be eliminated by selection. TRD is a property of complete t haplotypes and is considered a mechanism that is known to significantly deviate from the expected Mendelian ratios of inheritance of an allele or chromosome. TRD is suggested to be in particular regions of the mouse and human genome and is frequently associated with chromosome rearrangements. The mouse t complex responder locus (Tcr) is centrally involved in the phenomenon of male-specific TRD through its action in haploid germ cells. TCP-10b (t-complex protein 10b), also known as TCP-10a or T66A-a, is a 438 amino acid protein that is encoded by a gene that maps to mouse chromosome 17 A1.

REFERENCES

1. Bullard, D.C. and Schimenti, J.C. 1990. Molecular cloning and genetic mapping of the t complex responder candidate gene family. Genetics 124: 957-966.
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5. Ewulonu, U.K., et al. 1993. Functional and molecular characterization of the transcriptional regulatory region of Tcp-10bt, a testes-expressed gene from the t complex responder locus. Development 117: 89-95.
6. Islam, S.D., et al. 1993. The human homolog of a candidate mouse t complex responder gene: conserved motifs and evolution with punctuated equilibria. Hum. Mol. Genet. 2: 2075-2079.
7. Ewulonu, U.K., et al. 1996. Targeted mutagenesis of a candidate t complex responder gene in mouse t haplotypes does not eliminate transmission ratio distortion. Genetics 144: 785-792.
8. Gao, J.L., et al. 1998. Differential expansion of the N-formylpeptide receptor gene cluster in human and mouse. Genomics 51: 270-276.
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CHROMOSOMAL LOCATION

Genetic locus: Tcp10a (mouse) mapping to 17 A1.

PROTOCOLS

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

PRODUCT

TCP-10b siRNA (m) is a target-specific 19-25 nt siRNA 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 TCP-10b shRNA Plasmid (m): sc-154141-SH and TCP-10b shRNA (m) Lentiviral Particles: sc-154141-V as alternate gene silencing 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 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

TCP-10b siRNA (m) is recommended for the inhibition of TCP-10b 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 TCP-10b gene expression knockdown using RT-PCR Primer: TCP-10b (m)-PR: sc-154141-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.