

TMEM183 siRNA (m): sc-154421

BACKGROUND

TMEM183 (transmembrane protein 183), also known as Tmem183a or MNCb-2755, is a 375 amino acid membrane protein that belongs to the TMEM183 family. The gene that encodes TMEM183 maps to murine chromosome 1. Mouse chromosome 1 houses over 1,500 genes, some of which encode proteins such as nuclear receptor coactivators, coatomer complex subunits, synaptotagmins and olfactory receptors. In mice, chromosome 1 is the site of several recombination hotspots, indicating that chromosome 1 may play an important role in genetic diversity. Defects in chromosome 1-localized genes are associated with a variety of conditions, including autoimmune myocarditis, lymphocyte cell death, catalepsy, infantile neuroaxonal dystrophy and lung carcinomas.

REFERENCES

1. Kelmenson, P.M., et al. 2005. A torrid zone on mouse chromosome 1 containing a cluster of recombinational hotspots. *Genetics* 169: 833-841.
2. Matsushima, Y., et al. 2005. A new mouse model for infantile neuroaxonal dystrophy, inad mouse, maps to mouse chromosome 1. *Mamm. Genome* 16: 73-78.
3. Hollander, M.C., et al. 2005. Deletion of XPC leads to lung tumors in mice and is associated with early events in human lung carcinogenesis. *Proc. Natl. Acad. Sci. USA* 102: 13200-13205.
4. Katayama, S., et al. 2005. sense transcription in the mammalian transcriptome. *Science* 309: 1564-1566.
5. Ligons, D.L., et al. 2008. A locus on chromosome 1 promotes susceptibility of experimental autoimmune myocarditis and lymphocyte cell death. *Clin. Immunol.* 130: 74-82.
6. Hofstetter, J.R., et al. 2008. Characterization of the quantitative trait locus for haloperidol-induced catalepsy on distal mouse chromosome 1. *Genes Brain Behav.* 7: 214-223.
7. Paigen, K., et al. 2008. The recombinational anatomy of a mouse chromosome. *PLoS Genet.* 4: e1000119.

CHROMOSOMAL LOCATION

Genetic locus: Tmem183a (mouse) mapping to 1 E4.

PRODUCT

TMEM183 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 TMEM183 shRNA Plasmid (m): sc-154421-SH and TMEM183 shRNA (m) Lentiviral Particles: sc-154421-V as alternate gene silencing products.

For independent verification of TMEM183 (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-154421A, sc-154421B and sc-154421C.

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

TMEM183 siRNA (m) is recommended for the inhibition of TMEM183 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 TMEM183 gene expression knockdown using RT-PCR Primer: TMEM183 (m)-PR: sc-154421-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.