

# TMEM183 shRNA Plasmid (m): sc-154421-SH

## 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, coatmer 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

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## CHROMOSOMAL LOCATION

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

TMEM183 shRNA Plasmid (m) is a pool of 3 target-specific lentiviral vector plasmids each encoding 19-25 nt (plus hairpin) shRNAs designed to knock down gene expression. Each plasmid contains a puromycin resistance gene for the selection of cells stably expressing shRNA. Each vial contains 20 µg of lyophilized shRNA plasmid DNA. Suitable for up to 20 transfections. Also see TMEM183 siRNA (m): sc-154421 and TMEM183 shRNA (m) Lentiviral Particles: sc-154421-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized shRNA plasmid DNA at 4° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at 4° C for short term storage or -80° C for long term storage. Avoid repeated freeze thaw cycles.

Resuspend lyophilized shRNA plasmid DNA in 200 µl of the deionized water provided. Resuspension of the shRNA plasmid DNA in 200 µl of deionized water makes a 0.1 µg/µl solution in a 10 mM Tris, 1 mM EDTA buffered solution.

## APPLICATIONS

TMEM183 shRNA Plasmid (m) is recommended for the inhibition of TMEM183 expression in mouse cells.

## SUPPORT REAGENTS

For optimal shRNA Plasmid transfection efficiency, Santa Cruz Biotechnology's shRNA Plasmid Transfection Reagent: sc-108061 (0.2 ml) and shRNA Plasmid Transfection Medium: sc-108062 (20 ml) are recommended. Control shRNAs are available as 20 µg lyophilized plasmid DNA. Each encodes a scrambled shRNA sequence that will not lead to the specific degradation of any known cellular mRNA. Control shRNA Plasmids include: sc-108060, sc-108065 and sc-108066.

## 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 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.