SANTA CRUZ BIOTECHNOLOGY, INC.

# TMEM8C siRNA (m): sc-108138

## BACKGROUND

TMEM8C (transmembrane protein 8C), also known as TMEM226, is a 221 amino acid multi-pass membrane protein that belongs to the TMEM8 family. The gene encoding TMEM8C maps to human chromosome 9q34.2, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster. Interferons (IFNs)-$\alpha$ and -$\beta$ are cytokines that are widely known to induce potent antiviral activity. IFN-$\alpha$ and -$\beta$ exert a variety of other biological effects, including antitumor and immunomodulatory activities and are increasingly used clinically to treat a range of malignancies, myelodysplasias and autoimmune diseases.

## REFERENCES


1. Zhuang, H., Kosboth, M., Lee, P., Rice, A., Driscoll, D.J., Zori, R., Narain, S., Lyons, R., Satoh, M., Sobel, E. and Reeves, W.H. 2006. Lupus-like disease and high interferon levels corresponding to trisomy of the type I interferon cluster on chromosome 9p. Arthritis Rheum. 54: 1573-1579.
2. Burmeister, T., Schwartz, S., Taubald, A., Jost, E., Lipp, T., Schneller, F., Diedrich, H., Thomssen, H., Mey, U.J., Eucker, J., Rieder, H., Gökbuget, N., Hoelzer, D. and Thiel, E. 2007. Atypical Bcr-Abl mRNA transcripts in adult acute lymphoblastic leukemia. Haematologica 92: 1699-1702.
3. Cottin, V., Dupuis-Girod, S., Lesca, G. and Cordier, J.F. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (Rendu-Osler disease). Respiration 74: 361-378.
4. Zeitz, M.J., Marella, N.V., Malyavantham, K.S., Goetze, S., Bode, J., Raska, I. and Berezney, R. 2009. Organization of the amplified type I interferon gene cluster and associated chromosome regions in the interphase nucleus of human osteosarcoma cells. Chromosome Res. 17: 305-319.


## CHROMOSOMAL LOCATION

Genetic locus: Tmem8c (mouse) mapping to 2 A3.

## PRODUCT

TMEM8C 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 TMEM8C shRNA Plasmid (m): sc-108138-SH and TMEM8C shRNA (m) Lentiviral Particles: sc-108138-V as alternate gene silencing products.

For independent verification of TMEM8C (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-108138A, sc-108138B and sc-108138C.

## PROTOCOLS

See our web site at 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 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

TMEM8C siRNA (m) is recommended for the inhibition of TMEM8C 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 TMEM8C gene expression knockdown using RT-PCR Primer: TMEM8C (m)-PR: sc-108138-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. He, J., Wang, F., Zhang, P., Li, W., Wang, J., Li, J., Liu, H. and Chen, X. 2017. miR-491 inhibits skeletal muscle differentiation through targeting myomaker. Arch. Biochem. Biophys. 625-626: 30-38.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.