SANTA CRUZ BIOTECHNOLOGY, INC.

DC-TM4F2 siRNA (m): sc-142888

BACKGROUND

The tetraspanins are integral membrane proteins expressed on cell surface and granular membranes of hematopoietic cells and are components of multi-molecular complexes with specific integrins. DC-TM4F2, also known as TSPAN14 (tetraspanin 14) or TM4SF14, is a 270 amino acid multi-pass membrane protein belonging to the tetraspanin (TM4SF) family. Existing as two isoforms produced by alternative splicing events, DC-TM4F2 is encoded by a gene located on human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

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3. Berger, P., Young, P. and Suter, U. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. Neurogenetics 4: 1-15.
4. Kuhl, A., Melberg, A., Meinl, E., Nürnberg, G., Nürnberg, P., Kehrer-Sawatzki, H. and Jenne, D.E. 2008. Myofibrillar myopathy with arrhythmogenic right ventricular cardiomyopathy 7: corroboration and narrowing of the critical region on 10q22.3. Eur. J. Hum. Genet. 16: 367-373.
5. Bankovic, J., Stojsic, J., Jovanovic, D., Andjelkovic, T., Milinkovic, V., Ruzdijic, S. and Tanic, N. 2010. Identification of genes associated with non-small-cell lung cancer promotion and progression. Lung Cancer 67: 151-159.

CHROMOSOMAL LOCATION

Genetic locus: Tspan14 (mouse) mapping to 14 B.

PRODUCT

DC-TM4F2 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 DC-TM4F2 shRNA Plasmid (m): sc-142888-SH and DC-TM4F2 shRNA (m) Lentiviral Particles: sc-142888-V as alternate gene silencing products.

For independent verification of DC-TM4F2 (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-142888A, sc-142888B and sc-142888C.

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

DC-TM4F2 siRNA (m) is recommended for the inhibition of DC-TM4F2 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 DC-TM4F2 gene expression knockdown using RT-PCR Primer: DC-TM4F2 (m)-PR: sc-142888-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.