

CMTM4 siRNA (m): sc-142421

BACKGROUND

CMTM4 (CKLF-like MARVEL transmembrane domain containing 4), also known as CKLFSF4 (chemokine-like factor superfamily member 4), is a 234 amino acid member of the chemokine-like factor family. Members of the chemokine-like factor family share similarity with the chemokine and the transmembrane 4 superfamilies. The chemokine-like factor family is further divided into sub-families. CMTM4 belongs to a subfamily with CMTM6 and the 2 proteins are 31.1% identical at the level of amino acids. In addition, CMTM4 shares 97.6% similarity with its mouse homolog. Predominantly expressed in testis and prostate, CMTM4 is a multi-pass membrane protein containing one MARVEL domain. Three CMTM4 isoforms are expressed due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607887. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Han, W., et al. 2003. Identification of eight genes encoding chemokine-like factor superfamily members 1-8 (CKLFSF1-8) by in silico cloning and experimental validation. *Genomics* 81: 609-617.
3. Kittler, R., et al. 2004. An endoribonuclease-prepared siRNA screen in human cells identifies genes essential for cell division. *Nature* 432: 1036-1040.
4. Li, T., et al. 2008. Preparation, purification and characterization of the polyclonal antibody against human CMTM4. *Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi* 24: 41-44.

CHROMOSOMAL LOCATION

Genetic locus: Cmtm4 (mouse) mapping to 8 D3.

PRODUCT

CMTM4 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 CMTM4 shRNA Plasmid (m): sc-142421-SH and CMTM4 shRNA (m) Lentiviral Particles: sc-142421-V as alternate gene silencing products.

For independent verification of CMTM4 (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-142421A, sc-142421B and sc-142421C.

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

CMTM4 siRNA (m) is recommended for the inhibition of CMTM4 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.

GENE EXPRESSION MONITORING

CMTM4 (1E8): sc-81942 is recommended as a control antibody for monitoring of CMTM4 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CMTM4 gene expression knockdown using RT-PCR Primer: CMTM4 (m)-PR: sc-142421-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.