SANTA CRUZ BIOTECHNOLOGY, INC.

# CMTM5 siRNA (h): sc-92390

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*The Power to Question*

## BACKGROUND

CMTM (chemokine-like factor super family) is a novel family of proteins linking chemokines and members of the transmembrane 4 super family (TM4SF). CMTM5 (chemokine-like factor superfamily member 5), also known as CKLF-like MARVEL transmembrane domain containing 5, CKLFSF5 or FLJ37521, is a 223 amino acid multi-pass membrane protein and potential tumor suppressor belonging to the chemokine-like factor family. CMTM5 is highly expressed in brain and contains one MARVEL domain. CMTM5 induces apoptosis of multiple carcinoma cells through a caspase-dependent pathway. Alternative splicing events produce five CMTM5 isoforms; the major variant, termed CMTM5-v1, contains 156 amino acids and is broadly expressed in human fetal and adult tissues, but is undetectable in the majority carcinoma cell lines. The gene encoding CMTM5 maps to human chromosome 14q11.2, a locus associated with multiple cancers.

## REFERENCES


1. Raport, C.J., et al. 1996. New members of the chemokine receptor gene family. J. Leukoc. Biol. 59: 18-23.
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. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607888. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Shao, L., et al. 2007. CMTM5 exhibits tumor suppressor activities and is frequently silenced by methylation in carcinoma cell lines. Clin. Cancer Res. 13: 5756-5762.
5. Wang, Y., et al. 2008. CMTM3 can affect the transcription activity of androgen receptor and inhibit the expression level of PSA in LNCaP cells. Biochem. Biophys. Res. Commun. 371: 54-58.
6. Shao, L., et al. 2009. CMTM5-v1 induces apoptosis in cervical carcinoma cells. Biochem. Biophys. Res. Commun. 379: 866-871.


## CHROMOSOMAL LOCATION

Genetic locus: CMTM5 (human) mapping to 14q11.2.

## PRODUCT

CMTM5 siRNA (h) is a pool of 2 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 CMTM5 shRNA Plasmid (h): sc-92390-SH and CMTM5 shRNA (h) Lentiviral Particles: sc-92390-V as alternate gene silencing products.

For independent verification of CMTM5 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92390A and sc-92390B.

## RESEARCH USE

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

## 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

CMTM5 siRNA (h) is recommended for the inhibition of CMTM5 expression in human 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.

## GENE EXPRESSION MONITORING

CMTM5 (A-11): sc-374206 is recommended as a control antibody for monitoring of CMTM5 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 CMTM5 gene expression knockdown using RT-PCR Primer: CMTM5 (h)-PR: sc-92390-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.