SANTA CRUZ BIOTECHNOLOGY, INC.

CMTM1 siRNA (h): sc-92994

BACKGROUND

Chemokines are members of a superfamily of small inducible, secreted, pro-inflammatory cytokines. Members of the chemokine-like factor superfamily (CKLFSF) share similarities with both chemokine and transmembrane 4 superfamilies of signaling molecules. As a member of the CKLFSF family of proteins, CMTM1 (CKLF-like MARVEL transmembrane domain-containing protein 1), also known as CKLFSF1 (chemokine-like factor superfamily member 1), is a 169 amino acid multi-pass membrane protein that is highly expressed in testis, therefore probably playing a role in spermatogenesis or testicular development. CMTM1 contains a CC-chemokine motif and four transmembrane segments. The gene encoding CMTM1 resides in a tight gene cluster on human chromosome 16 with CKLF, CMTM2, CMTM3 and CMTM4. There are at least sixteen isoforms of CMTM1 that are produced as a result of alternative splicing events.

REFERENCES

1. 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.
2. Xu, M.X., et al. 2003. A novel *cis*-acting enhancer element between CKLF and CKLFSF1 genes. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 19: 276-278.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607884. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Ma, X.T., et al. 2004. Predicting polymerase II core promoters by cooperating transcription factor binding sites in eukaryotic genes. Acta Biochim. Biophys. Sin. 36: 250-258.
5. Wang, L., et al. 2004. Molecular cloning and characterization of chemokine-like factor super family member 1 (CKLFSF1), a novel human gene with at least 23 alternative splicing isoforms in testis tissue. Int. J. Biochem. Cell Biol. 36: 1492-1501.
6. Xu, M., et al. 2004. Last intron of the chemokine-like factor gene contains a putative promoter for the downstream CKLF super family member 1 gene. Biochem. Biophys. Res. Commun. 313: 135-141.

CHROMOSOMAL LOCATION

Genetic locus: CMTM1 (human) mapping to 16q21.

PRODUCT

CMTM1 siRNA (h) is a target-specific 19-25 nt siRNA 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 CMTM1 shRNA Plasmid (h): sc-92994-SH and CMTM1 shRNA (h) Lentiviral Particles: sc-92994-V as alternate gene silencing products.

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

CMTM1 siRNA (h) is recommended for the inhibition of CMTM1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CMTM1 gene expression knockdown using RT-PCR Primer: CMTM1 (h)-PR: sc-92994-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.