SANTA CRUZ BIOTECHNOLOGY, INC.

CSMD1 siRNA (m): sc-77035

BACKGROUND

The CUB and sushi domain-containing proteins, CSMD1-3, are membrane proteins that are involved in cell-cell adhesion and are weakly expressed in most tissues, with higher levels of expression observed in the cerebellum and hippocampus. CSMD1 is part of the complement system that defends against pathogens through either the classical pathway or the alternative pathway. Located primarily in nerve growth cones, CSMD1 blocks the classical pathway of the immune system and is thought to be involved in tumor suppression, as defects in the gene encoding CSMD1 are associated with squamous cell carcinomas. CSMD2 and CSMD3 are located primarily in the brain and are implicated in some forms of head and neck cancer. Additionally, the CSMD3 gene is a candidate for induction of epileptic seizures.

REFERENCES

1. Sun, P.C., et al. 2001. Transcript map of the 8p23 putative tumor suppressor region. Genomics 75: 17-25.
2. Lau, W.L. and Scholnick, S.B. 2003. Identification of two new members of the CSMD gene family small star, filled. Genomics 82: 412-415.
3. Shimizu, A., et al. 2003. A novel giant gene CSMD3 encoding a protein with CUB and sushi multiple domains: a candidate gene for benign adult familial myoclonic epilepsy on human chromosome 8q23.3-q24.1. Biochem. Biophys. Res. Commun. 309: 143-154.
4. Riedl, S., et al. 2004. Pronounced short stature in a girl with tricho-rhino-phalangeal syndrome II (TRPS II, Langer-Giedion syndrome) and growth hormone deficiency. Am. J. Med. Genet. A 131: 200-203.
5. Richter, T.M., et al. 2005. Epigenetic inactivation and aberrant transcription of CSMD1 in squamous cell carcinoma cell lines. Cancer Cell Int. 5: 29.
6. Kraus, D.M., et al. 2006. CSMD1 is a novel multiple domain complement-regulatory protein highly expressed in the central nervous system and epithelial tissues. J. Immunol. 176: 4419-4430.

CHROMOSOMAL LOCATION

Genetic locus: Csmd1 (mouse) mapping to 8 A1.1.

PRODUCT

CSMD1 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 CSMD1 shRNA Plasmid (m): sc-77035-SH and CSMD1 shRNA (m) Lentiviral Particles: sc-77035-V as alternate gene silencing products.

For independent verification of CSMD1 (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-77035A, sc-77035B and sc-77035C.

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

CSMD1 siRNA (m) is recommended for the inhibition of CSMD1 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 CSMD1 gene expression knockdown using RT-PCR Primer: CSMD1 (m)-PR: sc-77035-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.