



MTAC2D1 siRNA (h): sc-92165

BACKGROUND

MTAC2D1 (membrane targeting tandem C2 domain-containing protein 1), also known as TC2N (tandem C2 domains nuclear protein), C2CD1 or Tac2-N, is a 490 amino acid protein that localizes to the nucleus and contains one C2 domain. Existing as two alternatively spliced isoforms, MTAC2D1 is encoded by a gene that maps to human chromosome 14q32.12 and mouse chromosome 12 E. Chromosome 14 houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

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3. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. *Genome Res.* 16: 55-65.
4. Zahedi, R.P., et al. 2008. Phosphoproteome of resting human platelets. *J. Proteome Res.* 7: 526-534.
5. Lerner, A.J., et al. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
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CHROMOSOMAL LOCATION

Genetic locus: TC2N (human) mapping to 14q32.12.

PRODUCT

MTAC2D1 siRNA (h) 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 MTAC2D1 shRNA Plasmid (h): sc-92165-SH and MTAC2D1 shRNA (h) Lentiviral Particles: sc-92165-V as alternate gene silencing products.

For independent verification of MTAC2D1 (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-92165A, sc-92165B and sc-92165C.

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

MTAC2D1 siRNA (h) is recommended for the inhibition of MTAC2D1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MTAC2D1 gene expression knockdown using RT-PCR Primer: MTAC2D1 (h)-PR: sc-92165-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.