SANTA CRUZ BIOTECHNOLOGY, INC.

MTMR9 siRNA (m): sc-61098

BACKGROUND

Myotubularin and the myotubularin-related proteins belong to a highly conserved family of eukaryotic phosphatases that utilize inositol phospholipids, rather than phosphoproteins, as substrates. MTMR9 (myotubularin-related protein 9), also known as C8orf9, is a 549 amino acid protein that belongs to the protein-tyrosine phosphatase family and non-receptor class myotubularin subfamily. Localizing to the cytoplasm, MTMR9 is expressed in many tissues, including brain. MTMR9 interacts with MTMR6, MTMR7 and MTMR8. As opposed to other members of the myotubularin-related protein family, MTMR9 does not contain a dual-specificity phosphatase domain, and is a probable pseudophosphatase. Containing a double-helical motif similar to the SET interaction domain, MTMR9 may function in the control of cell proliferation.

REFERENCES

1. Appel, S., et al. 2001. Identification and localization of a new human myotubularin-related protein gene, mtmr8, on 8p22-p23. Genomics 75: 6-8.
2. Laporte, J., et al. 2001. The myotubularin family: from genetic disease to phosphoinositide metabolism. Trends Genet. 17: 221-228.
3. Appel, S., et al. 2002. Physical and transcriptional map of the critical region for keratolytic winter erythema (KWE) on chromosome 8p22-p23 between D8S550 and D8S1759. Eur. J. Hum. Genet. 10: 17-25.
4. Yanagiya, T., et al. 2007. Association of single-nucleotide polymorphisms in MTMR9 gene with obesity. Hum. Mol. Genet. 16: 3017-3026.
5. Hotta, K., et al. 2011. Association of variations in the FTO, SCG3 and MTMR9 genes with metabolic syndrome in a Japanese population. J. Hum. Genet. 56: 647-651.

CHROMOSOMAL LOCATION

Genetic locus: Mtmr9 (mouse) mapping to 14 D1.

PRODUCT

MTMR9 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 MTMR9 shRNA Plasmid (m): sc-61098-SH and MTMR9 shRNA (m) Lentiviral Particles: sc-61098-V as alternate gene silencing products.

For independent verification of MTMR9 (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-61098A, sc-61098B and sc-61098C.

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

MTMR9 siRNA (m) is recommended for the inhibition of MTMR9 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 MTMR9 gene expression knockdown using RT-PCR Primer: MTMR9 (m)-PR: sc-61098-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.

PROTOCOLS

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