



# MTMR8 siRNA (h): sc-91354

## 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. MTMR8 (myotubularin related protein 8) is a 704 amino acid protein that localizes to the nuclear envelope and is a member of the protein-tyrosine phosphatase family and non-receptor class myotubularin subfamily. Existing as two alternatively spliced isoforms, MTMR8 contains one myotubularin phosphatase domain and functions as a phosphatase that targets lipids containing phosphoinositol headgroups. The gene encoding MTMR8 maps to human chromosome X, which consists of about 153 million base pairs and nearly 1,000 genes. Color blindness, hemophilia and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently, as males carry a single X chromosome.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: MTMR8 (human) mapping to Xq11.2.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

MTMR8 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MTMR8 shRNA Plasmid (h): sc-91354-SH and MTMR8 shRNA (h) Lentiviral Particles: sc-91354-V as alternate gene silencing products.

For independent verification of MTMR8 (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-91354A, sc-91354B and sc-91354C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

MTMR8 siRNA (h) is recommended for the inhibition of MTMR8 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  $\mu$ M in 66  $\mu$ 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 MTMR8 gene expression knockdown using RT-PCR Primer: MTMR8 (h)-PR: sc-91354-PR (20  $\mu$ 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.