

# CTRP5/MFRP siRNA (m): sc-77054

## BACKGROUND

Members of the C1q superfamily have diverse functions that are related to cell adhesion and basement membrane components. CTRP5 (complement C1q tumor necrosis factor-related protein 5) is a 243 amino acid secreted and membrane-associated protein that contains a collagen-like domain and a C1q domain. CTRP5 is a short-chain collagen that is expressed in retinal pigment epithelium as well as brain, lung, liver and placenta. By forming an extracellular hexagonal lattice, CTRP5 facilitates the adhesion of basal retinal pigment epithelium to Bruch's membrane, the innermost layer of the choroid. A mutation within the C1q domain of CTRP5 results in abnormal high molecular weight aggregate formation, which alters its structure and interactions. This mutation may result in the presentation of late-onset retinal degeneration (LORD), an autosomal dominant disorder that is characterized by punctate yellow-white deposits in the retinal fundus and night blindness.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: C1qtnf5 (mouse) mapping to 9 A5.1.

## PRODUCT

CTRP5/MFRP siRNA (m) is a pool of 2 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 CTRP5/MFRP shRNA Plasmid (m): sc-77054-SH and CTRP5/MFRP shRNA (m) Lentiviral Particles: sc-77054-V as alternate gene silencing products.

For independent verification of CTRP5/MFRP (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-77054A and sc-77054B.

## 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

CTRP5/MFRP siRNA (m) is recommended for the inhibition of CTRP5/MFRP 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  $\mu$ 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 CTRP5/MFRP gene expression knockdown using RT-PCR Primer: CTRP5/MFRP (m)-PR: sc-77054-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.

## PROTOCOLS

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