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# MGRN1 siRNA (m): sc-149417

## BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. MGRN1 (mahogunin, RING finger 1), also known as RNF156, is a 552 amino acid protein that contains one RING-type zinc finger and is subject to autoubiquitination. Playing a role in protein modification, MGRN1 is thought to function as an E3 ubiquitin-protein ligase, accepting ubiquitin (in the form of a thioester) from an E2 ubiquitin-conjugating enzyme and transferring that ubiquitin residue to substrates targeted for degradation. Four isoforms of MGRN1 exist due to alternative splicing events.

## REFERENCES

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2. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. *DNA Res.* 5: 31-39.
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4. Phan, L.K., et al. 2002. The mouse mahogunoid coat color mutation disrupts a novel C3HC4 RING domain protein. *J. Clin. Invest.* 110: 1449-1459.
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7. Kim, B.Y., et al. 2007. Spongiform neurodegeneration-associated E3 ligase mahogunin ubiquitylates TSG101 and regulates endosomal trafficking. *Mol. Biol. Cell* 18: 1129-1142.
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## CHROMOSOMAL LOCATION

Genetic locus: Mgrn1 (mouse) mapping to 16 A1.

## PRODUCT

MGRN1 siRNA (m) is a target-specific 19-25 nt siRNA 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 MGRN1 shRNA Plasmid (m): sc-149417-SH and MGRN1 shRNA (m) Lentiviral Particles: sc-149417-V as alternate gene silencing products.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ 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

MGRN1 siRNA (m) is recommended for the inhibition of MGRN1 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 MGRN1 gene expression knockdown using RT-PCR Primer: MGRN1 (m)-PR: sc-149417-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.