

MN1 siRNA (m): sc-149485

BACKGROUND

The MN1 gene, which resides on chromosome 22, encodes a 1,319 amino acid protein. The ETV6/TEL gene has been reported to fuse to MN1. The MN1-TEL fusion protein, encoded by the translocation (12;22)(p13;q11) in myeloid leukemia, is a transcription factor with transforming activity. Defects in MN1 (meningioma 1) may be a cause of meningiomas, slowly growing benign tumors derived from the arachnoidal cap cells of the leptomeninges, the soft coverings of the brain and spinal cord.

REFERENCES

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3. Buijs, A., et al. 2000. The MN1-TEL fusion protein, encoded by the translocation (12;22)(p13;q11) in myeloid leukemia, is a transcription factor with transforming activity. *Mol. Cell Biol.* 20: 9281-9293.
4. Galmarini, C.M., et al. 2003. Drug resistance associated with loss of p53 involves extensive alterations in microtubule composition and dynamics. *Br. J. Cancer* 88: 1793-1799.
5. van Wely, K.H., et al. 2003. The MN1 oncoprotein synergizes with coactivators RAC3 and p300 in RAR-RXR-mediated transcription. *Oncogene* 22: 699-709.
6. Belloni, E., et al. 2004. A new complex rearrangement involving the ETV6, LOC115548, and MN1 genes in a case of acute myeloid leukemia. *Genes Chromosomes Cancer* 41: 272-277.
7. Valle, V.D., et al. 2004. Expression of the MN1-TEL fusion protein in the human UCSD/AML1 leukemic cell line. *Leukemia* 18: 1558-1560.
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CHROMOSOMAL LOCATION

Genetic locus: Mn1 (mouse) mapping to 5 F.

PRODUCT

MN1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MN1 shRNA Plasmid (m): sc-149485-SH and MN1 shRNA (m) Lentiviral Particles: sc-149485-V as alternate gene silencing products.

For independent verification of MN1 (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-149485A, sc-149485B and sc-149485C.

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

MN1 siRNA (m) is recommended for the inhibition of MN1 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 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.

GENE EXPRESSION MONITORING

MN1 (A-4): sc-390869 is recommended as a control antibody for monitoring of MN1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MN1 gene expression knockdown using RT-PCR Primer: MN1 (m)-PR: sc-149485-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.