SANTA CRUZ BIOTECHNOLOGY, INC.

MEMO1 siRNA (h): sc-106215



BACKGROUND

MEM01 (mediator of cell motility 1), also known as C2orf4 or NS5ATP7, is a 297 amino acid protein that is thought to relax extracellular chemotactic signals that are targeted at the microtubule cytoskeleton, thereby controlling cell migration. Additionally, MEM01 is thought to mediate Neu signaling and is required for breast carcinoma migration, suggesting an important role in tumorigenesis. The gene encoding MEM01 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the chromosome 2-localized ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes, which also map to chromosome 2.

REFERENCES

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- McEvoy, C.R., et al. 2002. Frequency and genetic basis of MHC, β-2-microglobulin and MEM0-1 loss of heterozygosity in sporadic breast cancer. Tissue Antigens 60: 235-243.
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- Marone, R., et al. 2004. Memo mediates ErbB2-driven cell motility. Nat. Cell Biol. 6: 515-522.
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- Qiu, C., et al. 2008. Memo is homologous to nonheme iron dioxygenases and binds an ErbB2-derived phosphopeptide in its vestigial active site. J. Biol. Chem. 283: 2734-2740.

CHROMOSOMAL LOCATION

Genetic locus: MEMO1 (human) mapping to 2p23.1.

PRODUCT

MEM01 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MEM01 shRNA Plasmid (h): sc-106215-SH and MEM01 shRNA (h) Lentiviral Particles: sc-106215-V as alternate gene silencing products.

For independent verification of MEM01 (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-106215A, sc-106215B and sc-106215C.

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

MEMO1 siRNA (h) is recommended for the inhibition of MEMO1 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 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-442241. 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

MEM01 (AT1E9): sc-517412 is recommended as a control antibody for monitoring of MEM01 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 MarkerTM 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 MEM01 gene expression knockdown using RT-PCR Primer: MEM01 (h)-PR: sc-106215-PR (20 μ I). 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.