SANTA CRUZ BIOTECHNOLOGY, INC.

MDGA2 siRNA (h): sc-92093

BACKGROUND

MDGA2 (MAM domain containing glycosylphosphatidylinositol anchor 2), also known as MAMDC1 (MAM domain-containing protein 1), is a 956 amino acid protein that is involved in cell-to-cell interactions. Localized to the cell membrane as a GPI- and lipid-anchor, MDGA2 contains six Ig-like (immunoglobulin-like) domains and a MAM domain. The gene encoding MDGA2 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

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3. Larner, A.J., et al. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. J. Alzheimers Dis. 17: 259-265.
4. Hellquist, A., et al. 2009. Identification of MAMDC1 as a candidate susceptibility gene for systemic lupus erythematosus (SLE). PLoS ONE 4: e8037.
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CHROMOSOMAL LOCATION

Genetic locus: MDGA2 (human) mapping to 14q21.3.

PRODUCT

MDGA2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MDGA2 shRNA Plasmid (h): sc-92093-SH and MDGA2 shRNA (h) Lentiviral Particles: sc-92093-V as alternate gene silencing products.

For independent verification of MDGA2 (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-92093A, sc-92093B and sc-92093C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MDGA2 siRNA (h) is recommended for the inhibition of MDGA2 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 µM in 66 µl. 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 MDGA2 gene expression knockdown using RT-PCR Primer: MDGA2 (h)-PR: sc-92093-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.