SANTA CRUZ BIOTECHNOLOGY, INC.

AMAC1 siRNA (h): sc-93801

BACKGROUND

AMAC1 (acyl-malonyl condensing enzyme 1), also known as TMEM21A (transmembrane protein 21A), is a 338 amino acid multi-pass membrane protein that contains 2 DUF6 domains and is highly expressed in testis. AMAC1L1, AMAC1L2 and AMAC1L3 are acyl-malonyl condensing enzyme 1-like proteins that, similar to AMAC1, contain DUF6 domains and are present in tissues such as placenta and testis. Human AMAC1 and AMAC1L3 are encoded by genes which map to chromosome 17, while human AMAC1L1 and AMAC1L2 are encoded by genes that map to chromosomes 18 and 8, respectively. Together, chromosomes 8, 17 and 18 encode over 2,300 genes, some of which include the tumor suppressors p53 and BRCA1, as well as genes that are associated with Edwards syndrome, Niemann-Pick disease, Pfeiffer syndrome and congenital hypothyroidism.

REFERENCES

1. Carstea, E.D., et al. 1993. Linkage of Niemann-Pick disease type C to human chromosome 18. Proc. Natl. Acad. Sci. USA 90: 2002-2004.
2. Wildenauer, D.B., et al. 1999. Chromosomes 8 and 10 workshop. Am. J. Med. Genet. 88: 239-243.
3. Appel, S., et al. 2002. Physical and transcriptional map of the critical region for keratolytic winter erythema (KWE) on chromosome 8p22-p23 between D8S550 and D8S1759. Eur. J. Hum. Genet. 10: 17-25.
4. Grosso, S., et al. 2005. Chromosome 18 aberrations and epilepsy: a review. Am. J. Med. Genet. A 134A: 88-94.
5. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. Nature 439: 331-335.

CHROMOSOMAL LOCATION

Genetic locus: SLC35G3 (human) mapping to 17q12.

PRODUCT

AMAC1 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AMAC1 shRNA Plasmid (h): sc-93801-SH and AMAC1 shRNA (h) Lentiviral Particles: sc-93801-V as alternate gene silencing products.

For independent verification of AMAC1 (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-93801A and sc-93801B.

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

AMAC1 siRNA (h) is recommended for the inhibition of AMAC1 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 AMAC1 gene expression knockdown using RT-PCR Primer: AMAC1 (h)-PR: sc-93801-PR (20 µl). 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.