SANTA CRUZ BIOTECHNOLOGY, INC.

SAMC siRNA (h): sc-78396

BACKGROUND

Transmethylation is the biochemical process of transferring a methyl group from one compound to another. Methylation reactions are important in key cellular processes, such as post-translational modification, embryonic development and postnatal development. S-adonosylmethionine (SAM) is a coenzyme important in catalyzing transmethylation reactions that occur in the liver. SAMC (S-adenosylmethionine mitochondrial carrier protein), also known as solute carrier family 25 member 26, is a 274 amino acid protein that transports SAM, as well as metabolites, nucleotides and cofactors, through the mitochondrial inner membrane. SAMC contains three Solcar repeats and is encoded by a gene on human chromosome 3p14.1. SAMC is widely expressed in the brain, heart, kidney, lung, skeletal muscle, pancreas, small intestine and liver, with high expression in the testis.

REFERENCES

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6. Grewal, S.I. and Rice, J.C. 2004. Regulation of heterochromatin by histone methylation and small RNAs. Curr. Opin. Cell Biol. 16: 230-238.
7. Loenen, W.A. 2006. S-adenosylmethionine: jack of all trades and master of everything? Biochem. Soc. Trans. 34: 330-333.
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CHROMOSOMAL LOCATION

Genetic locus: SLC25A26 (human) mapping to 3p14.1.

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.

PRODUCT

SAMC 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 SAMC shRNA Plasmid (h): sc-78396-SH and SAMC shRNA (h) Lentiviral Particles: sc-78396-V as alternate gene silencing products.

For independent verification of SAMC (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-78396A, sc-78396B and sc-78396C.

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

SAMC siRNA (h) is recommended for the inhibition of SAMC 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 SAMC gene expression knockdown using RT-PCR Primer: SAMC (h)-PR: sc-78396-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.