SANTA CRUZ BIOTECHNOLOGY, INC.

ME3 siRNA (h): sc-96553

BACKGROUND

ME3 (malic enzyme 3), also known as NADP-ME (NADP-dependent malic enzyme, mitochondrial), is a 604 amino acid protein of the mitochondrial matrix that catalyzes the conversion of (S)-malate and $NADP^+$ to pyruvate, carbon dioxide and NADPH. A member of the malic enzymes family, ME3 utilizes manganese and magnesium as cofactors and is expressed in tissues that divide at a low rate. The gene encoding ME3 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

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CHROMOSOMAL LOCATION

Genetic locus: ME3 (human) mapping to 11q14.2.

RESEARCH USE

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

PRODUCT

ME3 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 ME3 shRNA Plasmid (h): sc-96553-SH and ME3 shRNA (h) Lentiviral Particles: sc-96553-V as alternate gene silencing products.

For independent verification of ME3 (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-96553A, sc-96553B and sc-96553C.

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

ME3 siRNA (h) is recommended for the inhibition of ME3 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 ME3 gene expression knockdown using RT-PCR Primer: ME3 (h)-PR: sc-96553-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.