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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

ME2 siRNA (m): sc-149343

BACKGROUND

ME2, malic enzyme 2, is a mitochondrial NAD-dependent malic enzyme. Found as a homotetramer, the main function of ME2 is to catalyze the anaplerotic reaction yielding pyruvate from (s)-malate. One single-nucleotide polymorphism of the ME2 gene has been associated with a phenotype manifested as psychosis. ME2 directly interacts with the malate shuttle system and has roles in neuronal synthesis of glutamate and gamma-amino butyric acid. This system has been shown to be altered in schizophrenia and bipolar disorder, which is also characterized by forms of epilepsy brought on by the role ME2 on ion channels in the brain.

REFERENCES

1. Stöhlmacher, P., et al. 1989. Human malic enzyme-2 polymorphism in the GDR. Hum. Hered. 39: 58-60.
2. Lenzen, K.P., et al. 2005. Association analysis of malic enzyme 2 gene polymorphisms with idiopathic generalized epilepsy. Epilepsia 46: 1637-1641.
3. Gardiner, M. 2005. Genetics of idiopathic generalized epilepsies. Epilepsia 46: 15-20.
4. Turnbull, J., et al. 2005. Sacred disease secrets revealed: the genetics of human epilepsy. Hum. Mol. Genet. 14: 2491-2500.
5. Pongratz, R.L., et al. 2007. Cytosolic and mitochondrial malic enzyme isoforms differentially control Insulin secretion. J. Biol. Chem. 282: 200-207.
6. Lee, B.D., et al. 2007. Malic enzyme 2 and susceptibility to psychosis and mania. Psychiatry Res. 150: 1-11.
7. Tronconi, M.A., et al. 2008. *Arabidopsis* NAD-malic enzyme functions as a homodimer and heterodimer and has a major impact on nocturnal metabolism. Plant Physiol. 146: 1540-1552.

CHROMOSOMAL LOCATION

Genetic locus: Me2 (mouse) mapping to 18 E2.

PRODUCT

ME2 siRNA (m) 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 ME2 shRNA Plasmid (m): sc-149343-SH and ME2 shRNA (m) Lentiviral Particles: sc-149343-V as alternate gene silencing products.

For independent verification of ME2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-149343A, sc-149343B and sc-149343C.

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.

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

ME2 siRNA (m) is recommended for the inhibition of ME2 expression in mouse 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.

GENE EXPRESSION MONITORING

ME2 (F-5): sc-514850 is recommended as a control antibody for monitoring of ME2 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ME2 gene expression knockdown using RT-PCR Primer: ME2 (m)-PR: sc-149343-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.