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# SLC25A22 siRNA (m): sc-153506

## BACKGROUND

SLC25A22 (solute carrier family 25 member 22), also known as GC1 (mitochondrial glutamate carrier 1), is a 323 amino acid multi-pass membrane protein that belongs to the the SLC25 family of mitochondrial carriers that are responsible for transporting metabolites across the inner mitochondrial membrane. Existing as one of only two known mitochondrial glutamate/H<sup>+</sup> symporters, SLC25A22 is widely expressed and localizes to the mitochondrion inner membrane. SLC25A22 contains three Solcar repeats and plays an important role in the transport of glutamate across the inner mitochondrial membrane. Mutations in the gene encoding SLC25A22 are associated with myoclonic encephalopathy (EME). EME, also called neonatal epilepsy with suppression-burst pattern, is an autosomal recessive disorder characterized by early onset, massive myoclonus that is generally erratic and fragmentary, late tonic spasms and partial motor seizures. Patients with this disorder typically do not survive beyond 1-2 years after birth.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Slc25a22 (mouse) mapping to 7 F5.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

SLC25A22 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 SLC25A22 shRNA Plasmid (m): sc-153506-SH and SLC25A22 shRNA (m) Lentiviral Particles: sc-153506-V as alternate gene silencing products.

For independent verification of SLC25A22 (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-153506A, sc-153506B and sc-153506C.

## 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

SLC25A22 siRNA (m) is recommended for the inhibition of SLC25A22 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC25A22 gene expression knockdown using RT-PCR Primer: SLC25A22 (m)-PR: sc-153506-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.