SANTA CRUZ BIOTECHNOLOGY, INC.

CGI-69 siRNA (h): sc-94026

BACKGROUND

CGI-69, also known as SLC25A39 (solute carrier family 25, member 39) is a multi-pass membrane protein that is expressed in a variety of tissues with predominant expression in kidney and testis. Belonging to the mitochondrial carrier family (a family whose members participate in the transport of molecules across the mitochondrial membrane), CGI-69 localizes to the inner mitochondrial membrane and contains three Solcar repeats. Human CGI-69 shares 86% identity and 98% similarity with its mouse counterpart. Due to alternative splicing events, CGI-69 exists in two isoforms, the longer of which is also known as CGI-69L. As is suggested by its strong expression in testis, CGI-69 may play an important role in mitochondrial function in this tissue.

REFERENCES

1. Yu, X.X., et al. 2001. Overexpression of the human 2-oxoglutarate carrier lowers mitochondrial membrane potential in HEK-293 cells: contrast with the unique cold-induced mitochondrial carrier CGI-69. Biochem. J. 353: 369-375.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610820. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Luk, E., et al. 2003. Manganese activation of superoxide dismutase 2 in *Saccharomyces cerevisiae* requires MTM1, a member of the mitochondrial carrier family. Proc. Natl. Acad. Sci. USA 100: 10353-10357.
4. Haitina, T., et al. 2006. Fourteen novel human members of mitochondrial solute carrier family 25 (SLC25) widely expressed in the central nervous system. Genomics 88: 779-790.
5. Gijselinck, I., et al. 2008. Progranulin locus deletion in frontotemporal dementia. Hum. Mutat. 29: 53-58.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A39 (human) mapping to 17q21.31.

PRODUCT

CGI-69 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 CGI-69 shRNA Plasmid (h): sc-94026-SH and CGI-69 shRNA (h) Lentiviral Particles: sc-94026-V as alternate gene silencing products.

For independent verification of CGI-69 (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-94026A and sc-94026B.

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

CGI-69 siRNA (h) is recommended for the inhibition of CGI-69 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 CGI-69 gene expression knockdown using RT-PCR Primer: CGI-69 (h)-PR: sc-94026-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.