SANTA CRUZ BIOTECHNOLOGY, INC.

LYRM4 siRNA (h): sc-95519

BACKGROUND

LYRM4 (LYR motif-containing protein 4), also known as ISD11 or CGI-203, is a 91 amino acid protein that localizes to both the nucleus and the mitochondria, where it is essential for iron-sulfur protein biosynthesis. A member of the complex I LYR family, LYRM4 interacts with FXNA, in a manner that is enhanced by the presence of nickel, and inhibited by iron, zinc, cobalt, calcium, copper, magnesium and manganese. Loss of LYRM4 is associated with increased iron levels. LYRM4 is encoded by a gene that maps to human chromosome 6p25.1, and patients with Friedreich ataxia have been observed to have reduced LYRM4 mRNA levels. Chromosome 6 contains 170 million base pairs and comprises nearly 6% of the human genome. Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: LYRM4 (human) mapping to 6p25.1.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

LYRM4 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 LYRM4 shRNA Plasmid (h): sc-95519-SH and LYRM4 shRNA (h) Lentiviral Particles: sc-95519-V as alternate gene silencing products.

For independent verification of LYRM4 (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-95519A, sc-95519B and sc-95519C.

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

LYRM4 siRNA (h) is recommended for the inhibition of LYRM4 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 LYRM4 gene expression knockdown using RT-PCR Primer: LYRM4 (h)-PR: sc-95519-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.