SANTA CRUZ BIOTECHNOLOGY, INC.

cyclin M2 siRNA (h): sc-77061

BACKGROUND

Cyclin M2, also known as CNNM2 or ACDP2 (ancient conserved domain-containing protein 2), is an 875 amino acid multi-pass membrane protein that contains two CBS domains and belongs to the ACDP family. Expressed in a variety of tissues with highest expression in placenta, brain and kidney, cyclin M2 functions as a divalent metal cation transporter that mediates the transport of several different metal cations, including Mg^{2+}, Co^{2+} and Fe^{2+}. Cyclin M2 exists as multiple alternatively spliced isoforms and, contrary to its name, exhibits no cyclin-like function *in vivo*. The gene encoding cyclin M2 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CNNM2 (human) mapping to 10q24.32.

PRODUCT

cyclin M2 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 cyclin M2 shRNA Plasmid (h): sc-77061-SH and cyclin M2 shRNA (h) Lentiviral Particles: sc-77061-V as alternate gene silencing products.

For independent verification of cyclin M2 (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-77061A, sc-77061B and sc-77061C.

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

cyclin M2 siRNA (h) is recommended for the inhibition of cyclin M2 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 cyclin M2 gene expression knockdown using RT-PCR Primer: cyclin M2 (h)-PR: sc-77061-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.