SANTA CRUZ BIOTECHNOLOGY, INC.

IDI2 siRNA (m): sc-146142

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The Power to Question

BACKGROUND

IDI2 (isopentenyl-diphosphate δ-isomerase 2), also known as IPPI2 (isopentenyl pyrophosphate isomerase 2), is a 227 amino acid protein that belongs to the IPP isomerase type 1 family. Localizing to the peroxisome, IDI2 is expressed in skeletal muscle and contains one nudix hydrolase domain. IDI2 utilizes magnesium as a cofactor and participates in isoprenoid biosythesis. IDI2 catalytically converts isopentenyl diphosphate (IPP) to its electrophilic isomer, dimethylallyl diphosphate (DMAPP), a substrate for subsequent reactions that synthesize farnesyl diphosphate and, ultimately, cholesterol. The gene encoding IDI2 maps to human chromosome 10p15.3. Segmental copy-number gains to the IDI2 gene may contribute to the pathogenesis of sporadic amyotrophic lateral sclerosis (SALS). SALS, also known as Lou Gehrig's disease, is a motor neuron disease characterized by neuron degeneration.

REFERENCES

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3. Phillips, M.A., D'Auria, J.C., Gershenzon, J. and Pichersky, E. 2008. The *Arabidopsis thaliana* type I isopentenyl diphosphate isomerases are targeted to multiple subcellular compartments and have overlapping functions in isoprenoid biosynthesis. Plant Cell 20: 677-696.
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CHROMOSOMAL LOCATION

Genetic locus: Idi2 (mouse) mapping to 13 A1.

PROTOCOLS

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

PRODUCT

IDI2 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 IDI2 shRNA Plasmid (m): sc-146142-SH and IDI2 shRNA (m) Lentiviral Particles: sc-146142-V as alternate gene silencing products.

For independent verification of IDI2 (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-146142A, sc-146142B and sc-146142C.

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

IDI2 siRNA (m) is recommended for the inhibition of IDI2 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 IDI2 gene expression knockdown using RT-PCR Primer: IDI2 (m)-PR: sc-146142-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.