SANTA CRUZ BIOTECHNOLOGY, INC.

IDI1 siRNA (m): sc-146141

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The Power to Question

BACKGROUND

IDI1 (isopentenyl-diphosphate δ isomerase 1), also known as IPP1 or IPPI1, is a 227 amino acid member of the IPP isomerase type I family and is involved in cholesterol biosynthesis. Localized to the peroxisome, IDI1 catalytically converts isopentenyl diphosphate (IPP) to its electrophilic isomer, dimethylallyl diphosphate (DMAPP). Specifically, IDI1 uses magnesium as a cofactor to catalyze the 1,3-allylic rearrangement of IPP, thus creating DMAPP, a substrate for subsequent reactions that synthesize farnesyl diphosphate and, ultimately, cholesterol. Defects in the gene encoding IDI1 may be associated with peroxisomal deficiency diseases, such as Zellweger syndrome, a congenital disorder caused by a reduction in the number of peroxisomes. Individuals affected with this disorder generally exhibit lack of muscle tone, an enlarged liver, mental retardation and, in some cases, death.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Idi1 (mouse) mapping to 13 A1.

PROTOCOLS

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

PRODUCT

IDI1 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 IDI1 shRNA Plasmid (m): sc-146141-SH and IDI1 shRNA (m) Lentiviral Particles: sc-146141-V as alternate gene silencing products.

For independent verification of IDI1 (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-146141A, sc-146141B and sc-146141C.

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

IDI1 siRNA (m) is recommended for the inhibition of IDI1 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 IDI1 gene expression knockdown using RT-PCR Primer: IDI1 (m)-PR: sc-146141-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.