



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

IDI1 siRNA (m): sc-146141

BACKGROUND

IDI1 (isopentenyl-diphosphate δ isomerase 1), also known as IPP1 or IPP11, 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

1. Xuan, J.W., Kowalski, J., Chambers, A.F. and Denhardt, D.T. 1994. A human promyelocyte mRNA transiently induced by TPA is homologous to yeast IPP isomerase. *Genomics* 20: 129-131.
2. Krisans, S.K., Ericsson, J., Edwards, P.A. and Keller, G.A. 1994. Farnesyl-diphosphate synthase is localized in peroxisomes. *J. Biol. Chem.* 269: 14165-14169.
3. Hahn, F.M., Xuan, J.W., Chambers, A.F. and Poulter, C.D. 1996. Human isopentenyl diphosphate: dimethylallyl diphosphate isomerase: overproduction, purification, and characterization. *Arch. Biochem. Biophys.* 332: 30-34.
4. Paton, V.G., Shackelford, J.E. and Krisans, S.K. 1997. Cloning and subcellular localization of hamster and rat isopentenyl diphosphate dimethylallyl diphosphate isomerase. A PTS1 motif targets the enzyme to peroxisomes. *J. Biol. Chem.* 272: 18945-18950.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604055. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Breitling, R., Laubner, D., Clizbe, D., Adamski, J. and Krisans, S.K. 2003. Isopentenyl-diphosphate isomerases in human and mouse: evolutionary analysis of a mammalian gene duplication. *J. Mol. Evol.* 57: 282-291.
7. Clizbe, D.B., Owens, M.L., Masuda, K.R., Shackelford, J.E. and Krisans, S.K. 2007. IDI2, a second isopentenyl diphosphate isomerase in mammals. *J. Biol. Chem.* 282: 6668-6676.
8. Zheng, W., Sun, F., Bartlam, M., Li, X., Li, R. and Rao, Z. 2007. The crystal structure of human isopentenyl diphosphate isomerase at 1.7 Å resolution reveals its catalytic mechanism in isoprenoid biosynthesis. *J. Mol. Biol.* 366: 1447-1458.

CHROMOSOMAL LOCATION

Genetic locus: Id1 (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 μ M 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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M 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 μ M in 66 μ l. 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 μ l). 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.