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

SANTA CRUZ BIOTECHNOLOGY, INC.

# MPDU1 siRNA (m): sc-149527

## BACKGROUND

MPDU1 (mannose-P-dolichol utilization defect 1 protein), also designated suppressor of Lec15 and Lec35 glycosylation mutation or SL15, mediates the transfer of glucose and mannose residues from Glc-P-Dol and Man-P-Dol to oligosaccharides. Defects in the MPDU1 gene result in a type I congenital disorder of glycosylation CDG-If. Patients with CDG-If make incomplete lipid-linked oligosaccharides (LLO) and present with severe psychomotor retardation, seizures, failure to thrive, dry skin and scaling with erythroderma and impaired vision. Overexpression of GlcNAc-1-P transferase has been shown to impair the function of MPDU1, suggesting a form of pseudo-CDG-If.

## REFERENCES


1. Ware, F.E. and Lehrman, M.A. 1996. Expression cloning of a novel suppressor of the Lec15 and Lec35 glycosylation mutations of Chinese hamster ovary cells. J. Biol. Chem. 271: 13935-13938.
2. Kranz, C., Denecke, J., Lehrman, M.A., Ray, S., Kienz, P., Kreissel, G., Sagi, D., Peter-Katalinic, J., Freeze, H.H., Schmid, T., Jackowski-Dohrmann, S., Harms, E. and Marquardt, T. 2001. A mutation in the human MPDU1 gene causes congenital disorder of glycosylation type If (CDG-If). J. Clin. Invest. 108: 1613-1619.
3. Schenk, B., Imbach, T., Frank, C.G., Grubenmann, C.E., Raymond, G.V., Hurvitz, H., Korn-Lubetzki, I., Revel-Vik, S., Raas-Rotschild, A., Luder, A.S., Jaeken, J., Berger, E.G., Matthijs, G., Hennet, T. and Aebi, M. 2001. MPDU1 mutations underlie a novel human congenital disorder of glycosylation, designated type If. J. Clin. Invest. 108: 1687-1695.
4. Dupre, T., Lavieu, G., Moore, S. and Seta, N. 2004. Inherited disorders of protein glycosylation. Med. Sci. 20: 331-338.
5. Eklund, E.A., Merbouh, N., Ichikawa, M., Nishikawa, A., Clima, J.M., Dorman, J.A., Norberg, T. and Freeze, H.H. 2005. Hydrophobic Man-1-P derivatives correct abnormal glycosylation in Type I congenital disorder of glycosylation fibroblasts. Glycobiology 15: 1084-1093.
6. Freeze, H.H. 2007. Congenital disorders of glycosylation: CDG-I, CDG-II, and beyond. Curr. Mol. Med. 7: 389-396.
7. Gao, N., Shang, J. and Lehrman, M.A. 2008. Unexpected basis for impaired Glc3Man9GlcNAc2-P-P-dolichol biosynthesis by elevated expression of GlcNAc-1-P transferase. Glycobiology 18: 125-134.


## CHROMOSOMAL LOCATION

Genetic locus: Mpdu1 (mouse) mapping to 11 B3.

## PRODUCT

MPDU1 siRNA (m) is a target-specific 19-25 nt siRNA 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 MPDU1 shRNA Plasmid (m): sc-149527-SH and MPDU1 shRNA (m) Lentiviral Particles: sc-149527-V as alternate gene silencing products.

## 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

MPDU1 siRNA (m) is recommended for the inhibition of MPDU1 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 MPDU1 gene expression knockdown using RT-PCR Primer: MPDU1 (m)-PR: sc-149527-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.

## PROTOCOLS

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