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.

# MVK siRNA (m): sc-149725

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Mevalonate kinase (MVK) is an early enzyme in isoprenoid and sterol synthesis. Mevalonate kinase catalyzes the ATP-dependent phosphorylation of mevalonic acid to form mevalonate 5-phosphate. Mevalonate is a key intermediate, and mevalonate kinase a key early enzyme, in isoprenoid and sterol synthesis. Deficiency in MVK activity contributes to mevalonic aciduria and hyperimmunoglobulinemia D/periodic fever syndrome (HIDS). Mevalonic acid accumulates because of failure of conversion to 5-phosphomevalonic acid, which is catalyzed by mevalonate kinase. Mevalonic acid is synthesized from 3-hydroxy-3-methylglutaryl-CoA, a reaction catalyzed by HMG-CoA reductase.

## REFERENCES


1. Zheng, Q. 1994. On the exact hazard and survival functions of the MVK stochastic carcinogenesis model. Risk Anal. 14: 1081-1084.
2. Zheng, Q. 1995. On the MVK stochastic carcinogenesis model with Erlang distributed cell life lengths. Risk Anal. 15: 495-502.
3. Houten, S.M., Kuis, W., Duran, M., de Koning, T.J., van Royen-Kerkhof, A., Romeijn, G.J., Frenkel, J., Dorland, L., de Barse, M.M., Huijbers, W.A., Rijkers, G.T., Waterham, H.R., Wanders, R.J. and Poll-The, B.T. 1999. Mutations in MVK, encoding mevalonate kinase, cause hyperimmunoglobulinaemia D and periodic fever syndrome. Nat. Genet. 22: 175-177.
4. Houten, S.M., Koster, J., Romeijn, G.J., Frenkel, J., Di Rocco, M., Caruso, U., Landrieu, P., Kelley, R.I., Kuis, W., Poll-The, B.T., Gibson, K.M., Wanders, R.J. and Waterham, H.R. 2001. Organization of the mevalonate kinase (MVK) gene and identification of novel mutations causing mevalonic aciduria and hyperimmunoglobulinaemia D and periodic fever syndrome. Eur. J. Hum. Genet. 9: 253-259.
5. Cuisset, L., Drenth, J.P., Simon, A., Vincent, M.F., van der Velde Visser, S., van der Meer, J.W., Grateau, G. and Delpech, M. 2001. Molecular analysis of MVK mutations and enzymatic activity in hyper-IgD and periodic fever syndrome. Eur. J. Hum. Genet. 9: 260-266.
6. Fu, Z., Wang, M., Potter, D., Miziorko, H.M. and Kim, J.J. 2002. The structure of a binary complex between a mammalian mevalonate kinase and ATP: insights into the reaction mechanism and human inherited disease. J. Biol. Chem. 277: 18134-18142.
7. Houten, S.M., van Woerden, C.S., Wijburg, F.A., Wanders, R.J. and Waterham, H.R. 2003. Carrier frequency of the V377I (1129G>A) MVK mutation, associated with hyper-IgD and periodic fever syndrome, in the Netherlands. Eur. J. Hum. Genet. 11: 196-200.
8. Stojanov, S., Lohse, P., Lohse, P., Hoffmann, F., Renner, E.D., Zellerer, S., Kery, A., Shin, Y.S., Haas, D., Hoffmann, G.F. and Belohradsky, B.H. 2004. Molecular analysis of the MVK and TNFRSF1A genes in patients with a clinical presentation typical of the hyperimmunoglobulinemia D with periodic fever syndrome: a low-penetrance TNFRSF1A variant in a heterozygous MVK carrier possibly influences the phenotype of hyperimmunoglobulinemia D with periodic fever syndrome or vice versa. Arthritis Rheum. 50: 1951-1958.
9. LocusLink Report (LocusID: 4598). http://www.ncbi.nlm.nih.gov/LocusLink/


## CHROMOSOMAL LOCATION

Genetic locus: Mvk (mouse) mapping to 5 F.

## PRODUCT

MVK 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 MVK shRNA Plasmid (m): sc-149725-SH and MVK shRNA (m) Lentiviral Particles: sc-149725-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

MVK siRNA (m) is recommended for the inhibition of MVK 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 MVK gene expression knockdown using RT-PCR Primer: MVK (m)-PR: sc-149725-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.