



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)



EMP-3 siRNA (m): sc-144648

BACKGROUND

EMP-3 (epithelial membrane protein 3), also known as YMP, is a 163 amino acid multi-pass membrane protein that contains two N-linked glycosylation sites and four transmembrane domains. Expressed ubiquitously with highest expression in peripheral blood leukocytes, EMP-3 is a myelin-related protein that is thought to be involved in cell-cell interactions and cell proliferation. The gene encoding EMP-2 is implicated as a possible tumor suppressor that silences CpG promoter action, thereby inhibiting the growth of neuroblastomas and gliomas. Overexpression of EMP-3, however, may be associated with the development of oligodendroglial tumors (tumors that develop on the myelin producing cells of the central nervous system). Its ability to both repress and induce tumor formation suggests that normal amounts of EMP-3 keep tumor activity low, while increased EMP-3 expression may play a role in carcinogenesis.

REFERENCES

1. Taylor, V. and Suter, U. 1996. Epithelial membrane protein-2 and epithelial membrane protein-3: two novel members of the peripheral myelin protein 22 gene family. *Gene* 175: 115-120.
2. Ben-Porath, I. and Benvenisty, N. 1996. Characterization of a tumor-associated gene, a member of a novel family of genes encoding membrane glycoproteins. *Gene* 183: 69-75.
3. Liehr, T., Kuhlensäumer, G., Wulf, P., Taylor, V., Suter, U., Van Broeckhoven, C., Lupski, J.R., Claussen, U. and Rautenstrauss, B. 1999. Regional localization of the human epithelial membrane protein genes 1, 2, and 3 (EMP1, EMP2, EMP3) to 12p12.3, 16p13.2, and 19q13.3. *Genomics* 58: 106-108.
4. Luedtke, B., Pooler, L.M., Choi, E.Y., Tranchita, A.M., Reinbold, C.J., Brown, A.C., Shaffer, D.J., Roopenian, D.C. and Malarkannan, S. 2003. A single nucleotide polymorphism in the Emp3 gene defines the H4 minor histocompatibility antigen. *Immunogenetics* 55: 284-295.
5. Kneuper, E., Rug, M., Klonis, N., Tilley, L. and Cowman, A.F. 2005. Trafficking determinants for PfEMP3 export and assembly under the *Plasmodium falciparum*-infected red blood cell membrane. *Mol. Microbiol.* 58: 1039-1053.
6. Nielsen, K., Heegaard, S., Vorum, H., Birkenkamp-Demtröder, K., Ehlers, N. and Orntoft, T.F. 2005. Altered expression of CLC, DSG3, EMP3, S100A2, and SLPI in corneal epithelium from keratoconus patients. *Cornea* 24: 661-668.
7. Alaminos, M., Dávalos, V., Roperio, S., Setien, F., Paz, M.F., Herranz, M., Fraga, M.F., Mora, J., Cheung, N.K., Gerald, W.L. and Esteller, M. 2005. EMP3, a myelin-related gene located in the critical 19q13.3 region, is epigenetically silenced and exhibits features of a candidate tumor suppressor in glioma and neuroblastoma. *Cancer Res.* 65: 2565-2571.
8. Kunitz, A., Wolter, M., van den Boom, J., Felsberg, J., Tews, B., Hahn, M., Benner, A., Sabel, M., Lichter, P., Reifemberger, G., von Deimling, A. and Hartmann, C. 2007. DNA hypermethylation and aberrant expression of the EMP3 gene at 19q13.3 in human gliomas. *Brain Pathol.* 17: 363-370.

CHROMOSOMAL LOCATION

Genetic locus: Emp3 (mouse) mapping to 7 B4.

PRODUCT

EMP-3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see EMP-3 shRNA Plasmid (m): sc-144648-SH and EMP-3 shRNA (m) Lentiviral Particles: sc-144648-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 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

EMP-3 siRNA (m) is recommended for the inhibition of EMP-3 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 EMP-3 gene expression knockdown using RT-PCR Primer: EMP-3 (m)-PR: sc-144648-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.

PROTOCOLS

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