



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) 

PIG-Z siRNA (m): sc-152260

BACKGROUND

Several cell surface proteins are attached to the membrane through their C-terminal domain and a glycosylphosphatidylinositol (GPI) moiety. Phosphatidylinositol-glycans (PIGs) are multi-pass transmembrane proteins that localize to the endoplasmic reticulum. PIGs are crucial for the synthesis of very early intermediates in GPI-anchor biosynthesis. PIG-Z (phosphatidylinositol-glycan biosynthesis class Z protein), also known as GPI mannosyltransferase 4 and SMP3, is a 579 amino acid endoplasmic reticular protein that transfers the fourth mannose to some trimannosyl-GPIs during GPI precursor assembly. Since the presence of a fourth mannose in GPI is rarely detected, it is likely that it only exists in certain tissues. PIG-Z is widely expressed at very low levels, with highest expression in colon and brain.

REFERENCES

1. Udenfriend, S. and Kodukula, K. 1995. How glycosylphosphatidylinositol-anchored membrane proteins are made. *Annu. Rev. Biochem.* 64: 563-591.
2. Kinoshita, T., Ohishi, K. and Takeda, J. 1997. GPI-anchor synthesis in mammalian cells: genes, their products, and a deficiency. *J. Biochem.* 122: 251-257.
3. Grimme, S.J., Westfall, B.A., Wiedman, J.M., Taron, C.H. and Orlean, P. 2001. The essential Smp3 protein is required for addition of the side-branching fourth mannose during assembly of yeast glycosylphosphatidylinositols. *J. Biol. Chem.* 276: 27731-27739.
4. Oriol, R., Martinez-Duncker, I., Chantret, I., Mollicone, R. and Codogno, P. 2002. Common origin and evolution of glycosyltransferases using Dol-P-monosaccharides as donor substrate. *Mol. Biol. Evol.* 19: 1451-1463.
5. Taron, B.W., Colussi, P.A., Wiedman, J.M., Orlean, P. and Taron, C.H. 2004. Human Smp3p adds a fourth mannose to yeast and human glycosylphosphatidylinositol precursors *in vivo*. *J. Biol. Chem.* 279: 36083-36092.
6. Grimme, S.J., Colussi, P.A., Taron, C.H. and Orlean, P. 2004. Deficiencies in the essential Smp3 mannosyltransferase block glycosylphosphatidylinositol assembly and lead to defects in growth and cell wall biogenesis in *Candida albicans*. *Microbiology* 150: 3115-3128.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611671. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Gristwood, T., Fineran, P.C., Everson, L. and Salmond, G.P. 2008. PigZ, a TetR/AcrR family repressor, modulates secondary metabolism via the expression of a putative four-component resistance-nodulation-cell-division efflux pump, ZrpADBC, in *Serratia sp.* ATCC 39006. *Mol. Microbiol.* 69: 418-435.

CHROMOSOMAL LOCATION

Genetic locus: Pigz (mouse) mapping to 16 B2.

PROTOCOLS

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

PRODUCT

PIG-Z 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 PIG-Z shRNA Plasmid (m): sc-152260-SH and PIG-Z shRNA (m) Lentiviral Particles: sc-152260-V as alternate gene silencing products.

For independent verification of PIG-Z (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-152260A, sc-152260B and sc-152260C.

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

PIG-Z siRNA (m) is recommended for the inhibition of PIG-Z 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 PIG-Z gene expression knockdown using RT-PCR Primer: PIG-Z (m)-PR: sc-152260-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.