



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-X siRNA (m): sc-152258

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-X (phosphatidylinositol-glycan biosynthesis class X protein) is a 258 amino acid endoplasmic reticular protein that, along with PIG-M, is an essential component of GPI-mannosyltransferase 1, an enzyme that transfers the first of the four mannoses in the GPI-anchor precursors. Due to evidence showing that expression of PIG-M was very low in the absence of coexpressed PIG-X, it is likely that PIG-X stabilizes PIG-M. There are two isoforms of PIG-X that are produced as a result of alternative splicing events.

REFERENCES

1. Yeh, E.T., Kamitani, T. and Chang, H.M. 1994. Biosynthesis and processing of the glycosylphosphatidylinositol anchor in mammalian cells. *Semin. Immunol.* 6: 73-80.
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. Maeda, Y., Watanabe, R., Harris, C.L., Hong, Y., Ohishi, K., Kinoshita, K. and Kinoshita, T. 2001. PIG-M transfers the first mannose to glycosylphosphatidylinositol on the luminal side of the ER. *EMBO J.* 20: 250-261.
4. Kang, J.Y., Hong, Y., Ashida, H., Shishioh, N., Murakami, Y., Morita, Y.S., Maeda, Y. and Kinoshita, T. 2005. PIG-V involved in transferring the second mannose in glycosylphosphatidylinositol. *J. Biol. Chem.* 280: 9489-9497.
5. Ashida, H., Hong, Y., Murakami, Y., Shishioh, N., Sugimoto, N., Kim, Y.U., Maeda, Y. and Kinoshita, T. 2005. Mammalian PIG-X and yeast Pbn1p are the essential components of glycosylphosphatidylinositol-mannosyltransferase I. *Mol. Biol. Cell* 16: 1439-1448.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610276. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Kim, Y.U., Ashida, H., Mori, K., Maeda, Y., Hong, Y. and Kinoshita, T. 2007. Both mammalian PIG-M and PIG-X are required for growth of GPI14-disrupted yeast. *J. Biochem.* 142: 123-129.
8. Kim, Y.U. and Hong, Y. 2007. Functional analysis of the first mannosyltransferase (PIG-M) involved in glycosylphosphatidylinositol synthesis in *Plasmodium falciparum*. *Mol. Cells* 24: 294-300.

CHROMOSOMAL LOCATION

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

PROTOCOLS

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

PRODUCT

PIG-X siRNA (m) is a pool of 2 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-X shRNA Plasmid (m): sc-152258-SH and PIG-X shRNA (m) Lentiviral Particles: sc-152258-V as alternate gene silencing products.

For independent verification of PIG-X (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-152258A and sc-152258B.

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-X siRNA (m) is recommended for the inhibition of PIG-X 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-X gene expression knockdown using RT-PCR Primer: PIG-X (m)-PR: sc-152258-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.