

# PIG-G siRNA (m): sc-152250

## BACKGROUND

Phosphatidylinositol-glycans (PIGs) are multi-pass transmembrane proteins that localize to Endoplasmic reticulum. PIGs exhibit a variety of functions, but all are crucial for biosynthesis of the glycosylphosphatidylinositol (GPI)-anchor. Some PIG proteins are components of the GPI transamidase complex and play a role in the recognition of either the GPI attachment signal or the lipid portion of GPI. Other PIGs belong to the glycosyltransferase complex (GPI-N-acetylglucosaminyltransferase or GPI-GnT) and function in the transfer of N-acetylglucosamine (GlcNAc) to phosphatidylinositol (PI). An array of other PIGs play distinct roles in GPI synthesis. PIG-G (phosphatidylinositol glycan anchor biosynthesis, class G), also known as GPI ethanolamine phosphate transferase 2 or GPI7 homolog, is a 983 amino acid protein that exists as five alternatively spliced isoforms. Competing with PIG-O for the binding of PIG-F, PIG-G forms a complex with PIG-F, which is required for stabilization of the structure. Together PIG-G and PIG-F function as an ethanolamine phosphate transferase and catalyze the transfer of ethanolamine phosphate to the second mannose of GPI.

## REFERENCES

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3. Flury, I., et al. 2000. YLL031c belongs to a novel family of membrane proteins involved in the transfer of ethanolaminephosphate onto the core structure of glycosylphosphatidylinositol anchors in yeast. *J. Biol. Chem.* 275: 24458-24465.
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## CHROMOSOMAL LOCATION

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

## PRODUCT

PIG-G 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PIG-G shRNA Plasmid (m): sc-152250-SH and PIG-G shRNA (m) Lentiviral Particles: sc-152250-V as alternate gene silencing products.

For independent verification of PIG-G (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-152250A, sc-152250B and sc-152250C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

PIG-G siRNA (m) is recommended for the inhibition of PIG-G 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  $\mu$ M in 66  $\mu$ 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-G gene expression knockdown using RT-PCR Primer: PIG-G (m)-PR: sc-152250-PR (20  $\mu$ 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.