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PIG-O siRNA (m): sc-152255

BACKGROUND

Phosphatidylinositol-glycans (PIGs) are 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 PIGs play distinct roles in GPI synthesis. PIG-O (phosphatidylinositol glycan anchor biosynthesis, class O), also known as GPI ethanolamine phosphate transferase 3, is a 1,089 amino acid protein that exists as two alternatively spliced isoforms. Associating with PIG-F for stabilization, PIG-O functions as an ethanolamine phosphate (EtNP) transferase and catalyzes the transfer of EtNP to the GPI third mannose, which links the GPI-anchor to the protein C-terminus by an amide bond.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Pigo (mouse) mapping to 4 A5.

PRODUCT

PIG-O 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-O shRNA Plasmid (m): sc-152255-SH and PIG-O shRNA (m) Lentiviral Particles: sc-152255-V as alternate gene silencing products.

For independent verification of PIG-O (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-152255A, sc-152255B and sc-152255C.

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-O siRNA (m) is recommended for the inhibition of PIG-O 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-O gene expression knockdown using RT-PCR Primer: PIG-O (m)-PR: sc-152255-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.