

PIG-U siRNA (m): sc-61352

BACKGROUND

Phosphatidylinositol-glycans (PIGs) are multi-pass transmembrane proteins that localize to the endoplasmic reticulum. PIGs are crucial for the synthesis of N-acetylglucosaminyl-phosphatidylinositol, a very early intermediate in glycosylphosphatidylinositol (GPI)-anchor biosynthesis. PIGs play a role in the recognition of either the GPI attachment signal or the lipid portion of GPI. PIG-U (CDC91L1) is a critical part of GPI transamidase (GPIT), a multisubunit membrane-bound complex also consisting of Gaa1, Gpi8, PIG-S, and PIG-T. GPIT recognizes C-terminal signal sequences on proproteins and replaces them with specific GPI lipids. The PIG-U gene is oncogenic and is implicated in the development of human bladder cancer. Overexpression of PIG-U causes increased expression of the urokinase receptor (uPAR), a GPI-anchored protein, thereby amplifying signal transducer and activator of transcription (STAT-3) phosphorylation in bladder cancer cells, which may lead to cancer.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Pigu (mouse) mapping to 2 H1.

PRODUCT

PIG-U 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-U shRNA Plasmid (m): sc-61352-SH and PIG-U shRNA (m) Lentiviral Particles: sc-61352-V as alternate gene silencing products.

For independent verification of PIG-U (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-61352A, sc-61352B and sc-61352C.

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-U siRNA (m) is recommended for the inhibition of PIG-U 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-U gene expression knockdown using RT-PCR Primer: PIG-U (m)-PR: sc-61352-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.