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PLC-XD3 siRNA (m): sc-152301

BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a crucial role in the initiation of receptor-mediated signal transduction through the generation of two second messengers, inositol 1,4,5-triphosphate and diacylglycerol, from phosphatidylinositol 4,5-bisphosphate. PLC isozymes are divided into subclasses based on structure and activation mechanisms. PLC-XD3 (phosphatidylinositol-specific phospholipase C, X domain containing 3), also known as PI-PLC X domain-containing protein 3, is a 321 amino acid protein that contains one PI-PLC X-box domain, which is conserved from prokaryotes to mammals and is present in many PLC isozymes. Both X-box and Y-box domains are also important for catalytic activity in PLC proteins. PLC-XD3 is targeted by D5S430, which is a potential prognostic molecular survival marker for tumors without preoperative treatment. The gene that encodes PLC-XD3 maps to human chromosome 5p13.1.

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CHROMOSOMAL LOCATION

Genetic locus: Plcx3 (mouse) mapping to 15 A1.

PRODUCT

PLC-XD3 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 PLC-XD3 shRNA Plasmid (m): sc-152301-SH and PLC-XD3 shRNA (m) Lentiviral Particles: sc-152301-V as alternate gene silencing products.

For independent verification of PLC-XD3 (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-152301A, sc-152301B and sc-152301C.

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

PLC-XD3 siRNA (m) is recommended for the inhibition of PLC-XD3 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 PLC-XD3 gene expression knockdown using RT-PCR Primer: PLC-XD3 (m)-PR: sc-152301-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.