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SANTA CRUZ BIOTECHNOLOGY, INC.

PLC-XD2 siRNA (m): sc-152300

BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a crucial role in the initiation of receptor mediated signal transduction through the generation of the 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-XD2 (PI-PLC X domain-containing protein 2) is a 305 amino acid protein that contains a domain that is present in many PLC isozymes, the PI-PLC X (X-box) domain. Both the X-box domain and the Y-box domain are important for catalytic activity in PLC proteins. X-box domains are conserved from prokaryotes to mammals. The gene encoding PLC-XD2 maps to human chromosome 3q13.2, which is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. There are two isoforms of PLC-XD2 that are produced as a result of alternative splicing events.

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CHROMOSOMAL LOCATION

Genetic locus: Plcxd2 (mouse) mapping to 16 B5.

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.

PRODUCT

PLC-XD2 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PLC-XD2 shRNA Plasmid (m): sc-152300-SH and PLC-XD2 shRNA (m) Lentiviral Particles: sc-152300-V as alternate gene silencing products.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PLC-XD2 siRNA (m) is recommended for the inhibition of PLC-XD2 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 µM in 66 µl. 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-XD2 gene expression knockdown using RT-PCR Primer: PLC-XD2 (m)-PR: sc-152300-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.