



PLC ϵ siRNA (m): sc-152295

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. There are many mammalian PLC isozymes, including PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1, PLC δ 2 and PLC ϵ . Phospholipase C ϵ (PLC ϵ) is characterized by possession of CDC25 homology and Ras/Rap1-associating domains. PLC ϵ is translocated from the cytoplasm to the plasma membrane and activated by direct association with Ras at its Ras/Rap1-associating domain.

REFERENCES

1. Rhee, S.G., et al. 1992. Regulation of inositol phospholipid-specific phospholipase C isozymes. *J. Biol. Chem.* 267: 12393-12396.
2. Kelley, G.G., et al. 2001. Phospholipase C ϵ : a novel Ras effector. *EMBO J.* 20: 743-754.
3. Jin, T.G., et al. 2001. Role of the CDC25 homology domain of phospholipase C ϵ in amplification of Rap1-dependent signaling. *J. Biol. Chem.* 276: 30301-30307.
4. Wing, M.R., et al. 2001. Activation of phospholipase C ϵ by heterotrimeric G protein $\beta\gamma$ -subunits. *J. Biol. Chem.* 276: 48257-48261.
5. Song, C., et al. 2002. Differential roles of Ras and Rap1 in growth factor-dependent activation of phospholipase C ϵ . *Oncogene* 21: 8105-8113.
6. Wing, M.R., et al. 2003. Direct activation of phospholipase C ϵ by Rho. *J. Biol. Chem.* 278: 41253-41258.
7. Wing, M.R., et al. 2003. Direct activation of phospholipase C ϵ by Rho. *J. Biol. Chem.* 278: 41253-41258.
8. Seifert, J.P., et al. 2004. RhoA activates purified phospholipase C ϵ by a guanine nucleotide-dependent mechanism. *J. Biol. Chem.* 279: 47992-47997.

CHROMOSOMAL LOCATION

Genetic locus: Plce1 (mouse) mapping to 19 C3.

PRODUCT

PLC ϵ 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 ϵ shRNA Plasmid (m): sc-152295-SH and PLC ϵ shRNA (m) Lentiviral Particles: sc-152295-V as alternate gene silencing products.

For independent verification of PLC ϵ (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-152295A, sc-152295B and sc-152295C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support 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 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 ϵ siRNA (m) is recommended for the inhibition of PLC ϵ 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 ϵ gene expression knockdown using RT-PCR Primer: PLC ϵ (m)-PR: sc-152295-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.