SANTA CRUZ BIOTECHNOLOGY, INC.

PLC η2 siRNA (h): sc-88680

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 (IP3) and diacylglycerol (DAG) from phosphatidylinositol 4,5-bisphosphate. There are many mammalian PLC isozymes, including PLC β1, PLC β2, PLC β3, PLC β4, PLC γ1, PLC γ2, PLC δ1, PLC δ2, PLC ε and PLC η2. PLC η2 (phospholipase C, η2), also known as PLCH2 or PLCL4, is a 1,416 amino acid cell membrane protein that contains one C2 domain, one PH domain, one PI-PLC X-box and Y-box domain and two EF-hand domains. Expressed in kidney and retinal tissue, PLC η2 uses calcium as a cofactor to produce DAG and IP3, thereby playing an important role in the formation and maintenance of neuronal networks. Multiple isoforms of PLC η2 exist due to alternative splicing events.

REFERENCES

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3. Dotson, C.D., Roper, S.D. and Spector, A.C. 2005. PLC β2-independent behavioral avoidance of prototypical bitter-tasting ligands. Chem. Senses 30: 593-600.
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CHROMOSOMAL LOCATION

Genetic locus: PLCH2 (human) mapping to 1p36.32.

PRODUCT

PLC η2 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PLC η2 shRNA Plasmid (h): sc-88680-SH and PLC η2 shRNA (h) Lentiviral Particles: sc-88680-V as alternate gene silencing products.

For independent verification of PLC η2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88680A, sc-88680B and sc-88680C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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 η2 siRNA (h) is recommended for the inhibition of PLC η2 expression in human 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 η2 gene expression knockdown using RT-PCR Primer: PLC η2 (h)-PR: sc-88680-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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