SANTA CRUZ BIOTECHNOLOGY, INC.

PLC δ4 (h2): 293T Lysate: sc-173517

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 several mammalian PLC proteins, including PLC β1, PLC β2, PLC β3, PLC β4, PLCγ1, PLCγ2, PLC δ1, PLC δ3, PLC δ4 and PLCε. PLC δ1, a calcium signal amplifier, is activated by an atypical GTP-binding protein and functions as an effector for GTP-binding protein transglutaminase II-mediated oxytocin receptor and α1B-adrenoreceptor signaling. PLC δ1 is highly expressed in brain, heart, lung and testis and is abnormally accumulated in autopsied brains with Alzheimer's disease (AD), suggesting that it may play a role in the pathology of AD. Both PLC δ3 and PLC δ4 contain several functional domains through which they bind calcium as a cofactor and catalyze the creation of DAG and IP3, playing an essential role in signal transduction. PLC δ4 is highly expressed in skeletal muscle and kidney tissue, as well as in corneal epithelial cells, suggesting a role in the regulation of kidney and ocular function.

REFERENCES

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5. Tachibana T., Noguchi, K. and Ruda, M.A. 2002. Analysis of gene expression following spinal cord injury in rat using complementary DNA microarray. Neurosci. Lett. 327: 133-137.
6. Leung, D.W., Tompkins, C., Brewer, J., Ball, A., Coon, M., Morris, V., Waggoner, D., Singer, J.W. 2004. Phospholipase C δ4 overexpression upregulates ErbB1/2 expression, Erk signaling pathway, and proliferation in MCF-7 cells. Mol. Cancer 3: 15.

CHROMOSOMAL LOCATION

Genetic locus: PLCD4 (human) mapping to 2q35.

PRODUCT

PLC δ4 (h2): 293T Lysate represents a lysate of human PLC δ4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

PLC δ4 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PLC δ4 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.