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PP2C α (h2): 293T Lysate: sc-172768

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine protein phosphatases. The protein phosphatase 2C α (PP2C α) has broad specificity. It dephosphorylates and negatively regulates the activities of MAP kinases and MAP kinase-kinases, and also inhibits the activation of p38 and JNK kinase cascades induced by environmental stresses. PP2C α also induces the expression of endogenous p53 and the p53-responsive gene p21, leading to cell cycle arrest and apoptosis. The PP2C α protein, which contains an active site containing a dinuclear metal ion center, shows highest expression in epithelial cells as well as in the digestive tract, lung, kidney, breast, prostate, endocrine glands and brain.

REFERENCES

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3. Yokoyama, N., Kobayashi, T., Tamura, S. and Sugiya, H. 1996. Purification and characterization of protein phosphatase 2C in rat parotid acinar cells: two forms of Mg²⁺-activated histone phosphatase and phosphorylation by cAMP-dependent protein kinase. *Arch. Biochem. Biophys.* 331: 1-8.
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6. Jackson, M.D., Fjeld, C.C. and Denu, J.M. 2003. Probing the function of conserved residues in the serine/threonine phosphatase PP2C α . *Biochemistry* 42: 8513-8521.
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CHROMOSOMAL LOCATION

Genetic locus: PPM1A (human) mapping to 14q23.1.

PRODUCT

PP2C α (h2): 293T Lysate represents a lysate of human PP2C α transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

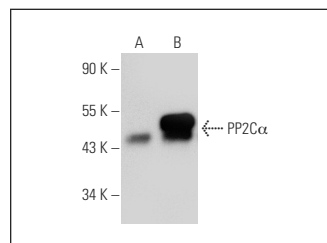
APPLICATIONS

PP2C α (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PP2C α antibodies. Recommended use: 10-20 μ l per lane.

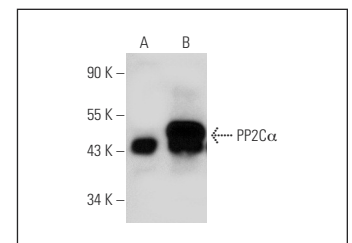
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PP2C α (p6c7): sc-56956 is recommended as a positive control antibody for Western Blot analysis of enhanced human PP2C α expression in PP2C α transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



PP2C α (p6c7): sc-56956. Western blot analysis of PP2C α expression in non-transfected: sc-117752 (A) and human PP2C α transfected: sc-172768 (B) 293T whole cell lysates.



PP2C α (6D708): sc-71922. Western blot analysis of PP2C α expression in non-transfected: sc-117752 (A) and human PP2C α transfected: sc-172768 (B) 293T whole cell lysates.

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.

PROTOCOLS

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