

PP2A-C α / β (FL-309): sc-14020

BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases. In general, the protein phosphatase (PP) holoenzyme is a trimeric complex composed of a regulatory subunit, a variable subunit, and a catalytic subunit. Four major families of protein phosphatase catalytic subunits have been identified, designated PP1, PP2A, PP2B (calcineurin) and PP2C. The PP2A family comprises subfamily members PP2A α and PP2A β . An additional protein phosphatase catalytic subunit, PPX (also known as PP4) is a putative member of a novel PP family. The PP2A catalytic subunit is a protein that associates with a variety of regulatory subunits. Regulatory subunits include PP2A-A α and -A β , PP2A-B α and -B β , PP2A-C α and -C β , PP2A-B56 α and -B56 β .

REFERENCES

1. Ueki, K., et al. 1992. Structure and expression of two isoforms of the murine calmodulin-dependent protein phosphatase regulatory subunit (calcineurin B). *Biochem. Biophys. Res. Commun.* 187: 537-543.
2. Cohen, P.T. 1993. Important roles for novel protein phosphatases dephosphorylating serine and threonine residues. *Biochem. Soc. Trans.* 21: 884-888.

SOURCE

PP2A-C α / β (FL-309) is a rabbit polyclonal antibody raised against amino acids 1-309 representing full length PP2A-C α of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PP2A-C α / β (FL-309) is recommended for detection of PP2A-C α / β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); may cross-react with PPX.

PP2A-C α / β (FL-309) is also recommended for detection of PP2A-C α / β in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of PP2A-C α / β : 36 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or PP2A-C β (h): 293T Lysate: sc-113470.

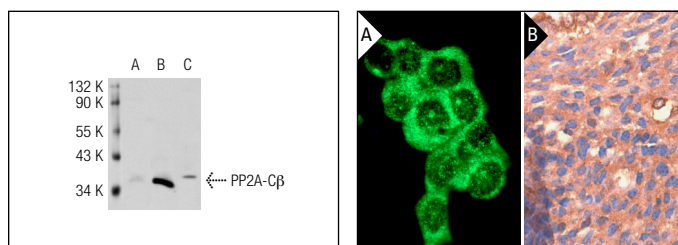
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA



PP2A-C α / β (FL-309): sc-14020. Western blot analysis of PP2A-C β expression in non-transfected 293T: sc-117752 (A), human PP2A-C β transfected 293T: sc-113470 (B) and Hep G2 (C) whole cell lysates.

PP2A-C α / β (FL-309): sc-14020. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse uterus tissue showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

1. Ahmed, N., et al. 2010. Modulation of PP2A activity by Jacalin: is it through caveolae and ER chaperones?. *Glycoconj. J.* 27: 723-734.
2. Park, Y.J., et al. 2010. Protective effect of isoflavones against homocysteine-mediated neuronal degeneration in SH-SY5Y cells. *Amino Acids* 39: 785-794.
3. Budziszewska, B., et al. 2010. The decrease in JNK- and p38-MAP kinase activity is accompanied by the enhancement of PP2A phosphate level in the brain of prenatally stressed rats. *J. Physiol. Pharmacol.* 61: 207-215.
4. Trapani, L., et al. 2010. Hypercholesterolemia and 3-hydroxy-3-methylglutaryl coenzyme A reductase regulation in aged female rats. *Exp. Gerontol.* 45: 119-128.
5. Liu, W.H., et al. 2010. Caffeine induces matrix metalloproteinase-2 (MMP-2) and MMP-9 down-regulation in human leukemia U937 cells via Ca²⁺/ROS-mediated suppression of ERK/c-fos pathway and activation of p38 MAPK/c-jun pathway. *J. Cell. Physiol.* 224: 775-785.
6. Purev, E., et al. 2011. PP2A interaction with Rb2/p130 mediates translocation of Rb2/p130 into the nucleus in all-trans retinoic acid-treated ovarian carcinoma cells. *J. Cell. Physiol.* 226: 1027-1034.
7. Walker, L.A., et al. 2011. Biochemical and myofilament responses of the right ventricle to severe pulmonary hypertension. *Am. J. Physiol. Heart Circ. Physiol.* 301: H832-H840.
8. Segatto, M., et al. 2012. Regulation of cholesterol biosynthetic pathway in different regions of the rat central nervous system. *Acta Physiol.* 206: 62-71.



Try **PP2A-C α / β (1D6): sc-80665** or **PP2A-C α / β (G-4): sc-166034**, our highly recommended monoclonal alternatives to PP2A-C α / β (FL-309). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PP2A-C α / β (1D6): sc-80665**.