

PP2C β (k1B1): sc-134219

BACKGROUND

Eukaryotic protein phosphorylation and dephosphorylation on serine and threonine residues regulates numerous cell functions, including division, homeostasis and apoptosis. A group of proteins that play a major role in this process are the serine/threonine protein phosphatases. Protein phosphatase (PP) holoenzyme is a trimeric complex that contains a regulatory subunit, a variable subunit and a catalytic subunit. PP2C family members are negative regulators of cell stress response pathways. The PP2C β enzyme has broad specificity and is highly expressed in the heart and skeletal muscle. It may be involved in cell cycle control as it dephosphorylates the cyclin-dependent kinases (CDKs), CDK2 and CDK6, *in vitro*. Overexpression of PP2C β can cause cell-growth arrest or cell death.

REFERENCES

1. Marley, A.E., et al. 1998. The cloning expression and tissue distribution of human PP2C β . FEBS Lett. 431: 121-124.
2. Cheng, A., et al. 2000. Dephosphorylation of human cyclin-dependent kinases by protein phosphatase type 2C α and β 2 isoforms. J. Biol. Chem. 275: 34744-34749.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603770. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Brautigan, D.L., et al. 2005. Allosteric activation of protein phosphatase 2C by D-chiro-inositol-galactosamine, a putative mediator mimetic of Insulin action. Biochemistry 44: 11067-11073.
5. Hufnagel, B., et al. 2005. Unsaturated fatty acids isolated from human lipoproteins activate protein phosphatase type 2C β and induce apoptosis in endothelial cells. Atherosclerosis 180: 245-254.

CHROMOSOMAL LOCATION

Genetic locus: PPM1B (human) mapping to 2p21.

SOURCE

PP2C β (k1B1) is a mouse monoclonal antibody raised against amino acids 288-479 corresponding to isoform 1 of recombinant PP2C β of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2b} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

PP2C β (k1B1) is recommended for detection of isoform 1 of PP2C β of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

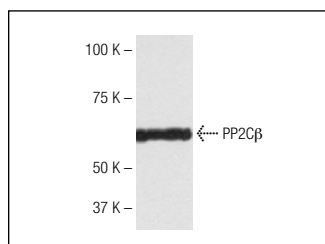
Suitable for use as control antibody for PP2C β siRNA (h): sc-61387, PP2C β shRNA Plasmid (h): sc-61387-SH and PP2C β shRNA (h) Lentiviral Particles: sc-61387-V.

Molecular Weight of PP2C β isoform 1: 53 kDa.

Molecular Weight of PP2C β isoform 2: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

DATA



PP2C β (k1B1): sc-134219. Western blot analysis of PP2C β expression in MCF7 whole cell lysate.

PROTOCOLS

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