SANTA CRUZ BIOTECHNOLOGY, INC.

PP2Cγ (D-7): sc-390625

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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) holo-enzyme 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 PP2Cγ enzyme localizes to the cytoplasm and is widely expressed, with most abundant expression detected in the testis, skeletal muscle, and heart. It is necessary for the dephosphorylation of pre-mRNA splicing factors, which is an important process for the formation of the functional spliceosome.

REFERENCES

1. Travis, S.M. and Welsh, M.J. 1997. PP2Cγ: a human protein phosphatase with a unique acidic domain. FEBS Lett. 412: 415-419.
2. Murray, M.V., et al. 1999. The type 2C Ser/Thr phosphatase PP2Cγ is a pre-mRNA splicing factor. Genes Dev. 13: 87-97.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605119. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res.14: 2121-2127.

CHROMOSOMAL LOCATION

Genetic locus: PPM1G (human) mapping to 2p23.3; Ppm1g (mouse) mapping to 5 B1.

SOURCE

PP2Cγ (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 14-34 at the N-terminus of PP2Cγ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PP2Cγ (D-7) is available conjugated to agarose (sc-390625 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390625 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390625 PE), fluorescein (sc-390625 FITC), Alexa Fluor® 488 (sc-390625 AF488), Alexa Fluor® 546 (sc-390625 AF546), Alexa Fluor® 594 (sc-390625 AF594) or Alexa Fluor® 647 (sc-390625 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390625 AF680) or Alexa Fluor® 790 (sc-390625 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390625 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PP2Cγ (D-7) is recommended for detection of PP2Cγ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PP2Cγ siRNA (h): sc-61388, PP2Cγ siRNA (m): sc-61390, PP2Cγ shRNA Plasmid (h): sc-61388-SH, PP2Cγ shRNA Plasmid (m): sc-61390-SH, PP2Cγ shRNA (h) Lentiviral Particles: sc-61388-V and PP2Cγ shRNA (m) Lentiviral Particles: sc-61390-V.

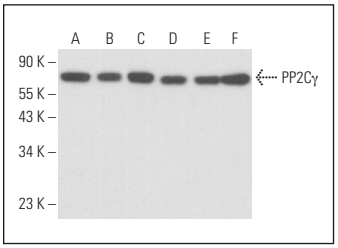
Molecular Weight of PP2Cγ: 68 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A549 cell lysate: sc-2413 or 3T3-L1 cell lysate: sc-2243.

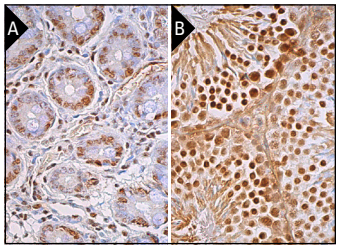
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PP2Cγ (D-7): sc-390625. Western blot analysis of PP2Cγ expression in Jurkat (**A**), A549 (**B**), 3T3-L1 (**C**), RAW 264.7 (**D**), PC-12 (**E**) and KNRK (**F**) whole cell lysates.



PP2Cγ (D-7): sc-390625. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells and interstitial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells (**B**).

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.