

PP2C γ (D-7): sc-390625

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 γ 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. PP2C γ : 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 PP2C γ 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

PP2C γ (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 14-34 at the N-terminus of PP2C γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PP2C γ (D-7) is available conjugated to agarose (sc-390625 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390625 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

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APPLICATIONS

PP2C γ (D-7) is recommended for detection of PP2C γ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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 PP2C γ siRNA (h): sc-61388, PP2C γ siRNA (m): sc-61390, PP2C γ shRNA Plasmid (h): sc-61388-SH, PP2C γ shRNA Plasmid (m): sc-61390-SH, PP2C γ shRNA (h) Lentiviral Particles: sc-61388-V and PP2C γ shRNA (m) Lentiviral Particles: sc-61390-V.

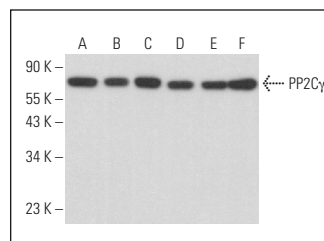
Molecular Weight of PP2C γ : 68 kDa.

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

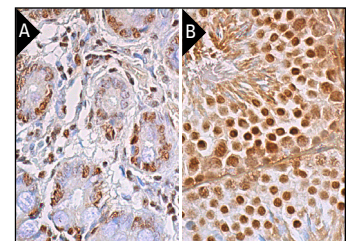
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PP2C γ (D-7): sc-390625. Western blot analysis of PP2C γ expression in Jurkat (A), A549 (B), 3T3-L1 (C), RAW 264.7 (D), PC-12 (E) and KNRK (F) whole cell lysates.



PP2C γ (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.