SANTA CRUZ BIOTECHNOLOGY, INC.

PP2B-Aγ (4D1): sc-293361

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 subunit have been identified, designated PP1, PP2A, PP2B and PP2C. An additional protein phosphatase catalytic subunit, PPX (also known as PP4), is a putative member of a novel PP family. The PP2B family comprises subfamily members PP2B-Aα, PP2B-Aβ and PP2B-Aγ. Two additional regulatory subunits been identified, designated PP2B-B1 and PP2B-B2.

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. Mumby, M.C., et al. 1993. Protein serine/threonine phosphatases: structure, regulation, and functions in cell growth. Physiol. Rev. 73: 673-699.
3. Hendrix, P., et al. 1993. Structure and expression of a 72-kDa regulatory subunit of protein phosphatase 2A. Evidence for different size forms produced by alternative splicing. J. Biol. Chem. 268: 15267-15276.
4. Cohen, P.T. 1993. Important roles for novel protein phosphatases dephosphorylating serine and threonine residues. Biochem. Soc. Trans. 21: 884-888.
5. Okubo, S., et al. 1994. A regulatory subunit of smooth muscle myosin bound phosphatase. Biochem. Biophys. Res. Commun. 200: 429-434.
6. Wera, S., et al. 1995. Serine/threonine protein phosphatases. Biochem. J. 311: 17-29.
7. Lohse, D.L., et al. 1995. Insights derived from the structures of the Ser/Thr phosphatases calcineurin and protein phosphatase 1. Structure 3: 987-990.

CHROMOSOMAL LOCATION

Genetic locus: PPP3CC (human) mapping to 8p21.3.

SOURCE

PP2B-Aγ (4D1) is a mouse monoclonal antibody raised against amino acids 1-81 of PP2B-Aγ of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 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.

APPLICATIONS

PP2B-Aγ (4D1) is recommended for detection of PP2B-Aγ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 PP2B-Aγ siRNA (h): sc-39197, PP2B-Aγ shRNA Plasmid (h): sc-39197-SH and PP2B-Aγ shRNA (h) Lentiviral Particles: sc-39197-V.

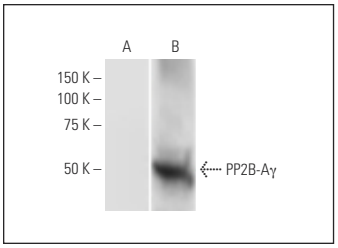
Molecular Weight of PP2B-Aγ: 57 kDa.

Positive Control: PP2B-Aγ transfected 293T whole cell lysate.

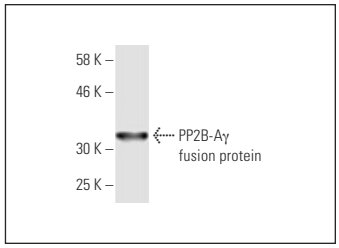
RECOMMENDED SUPPORT REAGENTS

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).

DATA



PP2B-Aγ (4D1): sc-293361. Western blot analysis of PP2B-Aγ expression in non-transfected (**A**) and PP2B-Aγ transfected (**B**) 293T whole cell lysates.



PP2B-Aγ (4D1): sc-293361. Western blot analysis of human recombinant PP2B-Aγ fusion protein.

RESEARCH USE

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

PROTOCOLS

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