SANTA CRUZ BIOTECHNOLOGY, INC.

PP2A-B56-β (E-6): sc-515676

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 subunits have been identified, designated PP1, PP2A, PP2B (calcineurin) and PP2C. An additional protein phosphatase catalytic subunit, PPX (also known as PP4) is a putative member of a novel PP family. The PP2A family comprises subfamily members PP2Aα and PP2Aβ. The PP2A catalytic subunit 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, -B56-β, -B56-γ and -B56-δ.

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.
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. Mumby, M.C., et al. 1993. Protein serine/threonine phosphatases: structure, regulation, and functions in cell growth. Phys. Rev. 73: 673-699.

CHROMOSOMAL LOCATION

Genetic locus: PPP2R5B (human) mapping to 11q13.1; Ppp2r5b (mouse) mapping to 19 A.

SOURCE

PP2A-B56-β (E-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 449-472 near the C-terminus of PP2A-B56-β 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.

PP2A-B56-β (E-6) is available conjugated to agarose (sc-515676 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515676 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515676 PE), fluorescein (sc-515676 FITC), Alexa Fluor® 488 (sc-515676 AF488), Alexa Fluor® 546 (sc-515676 AF546), Alexa Fluor® 594 (sc-515676 AF594) or Alexa Fluor® 647 (sc-515676 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515676 AF680) or Alexa Fluor® 790 (sc-515676 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PP2A-B56-β (E-6) is recommended for detection of PP2A-B56-β 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

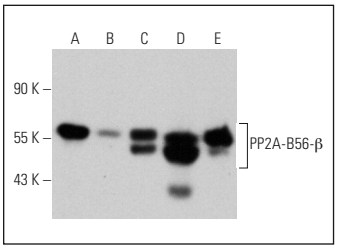
Suitable for use as control antibody for PP2A-B56-β siRNA (h): sc-39183, PP2A-B56-β siRNA (m): sc-39184, PP2A-B56-β shRNA Plasmid (h): sc-39183-SH, PP2A-B56-β shRNA Plasmid (m): sc-39184-SH, PP2A-B56-β shRNA (h) Lentiviral Particles: sc-39183-V and PP2A-B56-β shRNA (m) Lentiviral Particles: sc-39184-V.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or IMR-32 cell lysate: sc-2409.

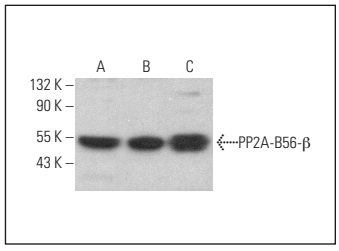
RECOMMENDED SUPPORT REAGENTS

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.

DATA



PP2A-B56-β (E-6): sc-515676. Western blot analysis of PP2A-B56-β expression in Jurkat (**A**), HeLa (**B**), A-431 (**C**), Hs 294T (**D**) and IMR-32 (**E**) whole cell lysates.



PP2A-B56-β (E-6): sc-515676. Western blot analysis of PP2A-B56-β expression in Jurkat (**A**), DU 145 (**B**) and PC-3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Göder, A., et al. 2018. HDAC1 and HDAC2 integrate checkpoint kinase phosphorylation and cell fate through the phosphatase-2A subunit PR130. Nat. Commun. 9: 764.

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.