SANTA CRUZ BIOTECHNOLOGY, INC.

PP2A-B56-δ (H5D12): sc-81605

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., et al. 1993. Important roles for novel protein phosphatases dephosphorylating serine and threonine residues. Biochem. Soc. Trans. 21: 884-888.

CHROMOSOMAL LOCATION

Genetic locus: PPP2R5D (human) mapping to 6p21.1; Ppp2r5d (mouse) mapping to 17 C.

SOURCE

PP2A-B56-δ (H5D12) is a mouse monoclonal antibody raised against GST-fusion protein corresponding to amino acids 2-165 of PP2A-B56-δ 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-δ (H5D12) is available conjugated to agarose (sc-81605 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-81605 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-81605 PE), fluorescein (sc-81605 FITC), Alexa Fluor® 488 (sc-81605 AF488), Alexa Fluor® 546 (sc-81605 AF546), Alexa Fluor® 594 (sc-81605 AF594) or Alexa Fluor® 647 (sc-81605 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-81605 AF680) or Alexa Fluor® 790 (sc-81605 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

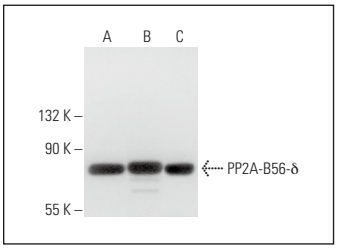
PP2A-B56-δ (H5D12) is recommended for detection of PP2A-B56-δ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with PP2A-B55, PP2A-B56-α, PP2A-B56-β, PP2A-B56-γ or PP2A-B56-ε.

Suitable for use as control antibody for PP2A-B56-δ siRNA (h): sc-95565, PP2A-B56-δ siRNA (m): sc-152396, PP2A-B56-δ siRNA (r): sc-270366, PP2A-B56-δ shRNA Plasmid (h): sc-95565-SH, PP2A-B56-δ shRNA Plasmid (m): sc-152396-SH, PP2A-B56-δ shRNA Plasmid (r): sc-270366-SH, PP2A-B56-δ shRNA (h) Lentiviral Particles: sc-95565-V, PP2A-B56-δ shRNA (m) Lentiviral Particles: sc-152396-V, and PP2A-B56-δ shRNA (r) Lentiviral Particles: sc-270366-V.

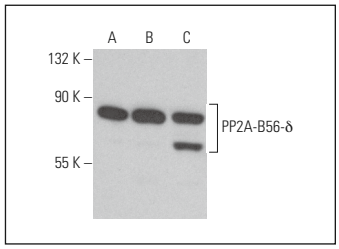
Molecular Weight of PP2A-B56-δ: 70 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

DATA



PP2A-B56-δ (H5D12): sc-81605. Western blot analysis of PP2A-B56-δ expression in HeLa (**A**) and HEK293 (**B**) whole cell lysates and HeLa nuclear extract (**C**).



PP2A-B56-δ (H5D12): sc-81605. Western blot analysis of PP2A-B56-δ expression in HeLa (**A**), K-562 (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Foley, E.A., et al. 2011. Formation of stable attachments between kinetochores and microtubules depends on the B56-PP2A phosphatase. Nat. Cell Biol. 13: 1265-1271.
2. Uchida, A., et al. 2018. Targeting BCL2 with venetoclax is a promising therapeutic strategy for "double-protein-expression" lymphoma with MYC and BCL2 rearrangements. Haematologica 104: 1417-1421.
3. De Palma, R.M., et al. 2019. The NMR-based characterization of the FTY720-SET complex reveals an alternative mechanism for the attenuation of the inhibitory SET-PP2A interaction. FASEB J. 33: 7647-7666.
4. Cheerathodi, M., et al. 2021. Epstein-Barr virus LMP1 modulates the CD63 interactome. Viruses 13: 675.
5. Cazzoli, R., et al. 2023. Endogenous PP2A inhibitor CIP2A degradation by chaperone-mediated autophagy contributes to the antitumor effect of mitochondrial complex I inhibition. Cell Rep. 42: 112616.

RESEARCH USE

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