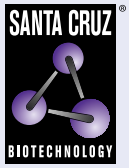
SANTA CRUZ BIOTECHNOLOGY, INC.

PP2B-Aβ (A-11): sc-365612



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. 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.
3. Mumby, M.C., et al. 1993. Protein serine/ threonine phosphatases: structure, regulation, and functions in cell growth. Physiol. Rev. 73: 673-699.
4. Cohen, P.T. 1993. Important roles for novel protein phosphatases dephosphorylating serine and threonine residues. Biochem. Soc. Trans. 21: 884-888.

CHROMOSOMAL LOCATION

Genetic locus: PPP3CB (human) mapping to 10q22.2; Ppp3cb (mouse) mapping to 14 A3.

SOURCE

PP2B-Aβ (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 499-524 at the C-terminus of PP2B-Aβ 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.

PP2B-Aβ (A-11) is available conjugated to agarose (sc-365612 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365612 PE), fluorescein (sc-365612 FITC), Alexa Fluor® 488 (sc-365612 AF488), Alexa Fluor® 546 (sc-365612 AF546), Alexa Fluor® 594 (sc-365612 AF594) or Alexa Fluor® 647 (sc-365612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365612 AF680) or Alexa Fluor® 790 (sc-365612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

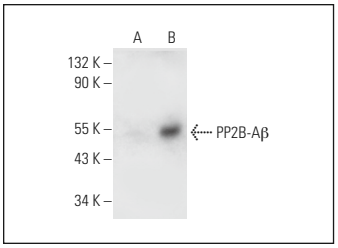
PP2B-Aβ (A-11) is recommended for detection of PP2B-Aβ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 PP2B-Aβ siRNA (h): sc-39195, PP2B-Aβ siRNA (m): sc-39196, PP2B-Aβ shRNA Plasmid (h): sc-39195-SH, PP2B-Aβ shRNA Plasmid (m): sc-39196-SH, PP2B-Aβ shRNA (h) Lentiviral Particles: sc-39195-V and PP2B-Aβ shRNA (m) Lentiviral Particles: sc-39196-V.

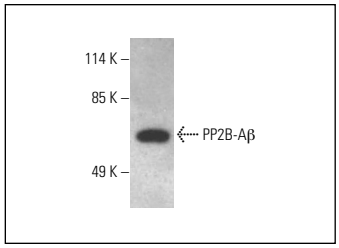
Molecular Weight of PP2B-Aβ: 62 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, human brain extract: sc-364375 or PP2B-Aβ (h): 293T Lysate: sc-114729.

DATA



PP2B-Aβ (A-11): sc-365612. Western blot analysis of PP2B-Aβ expression in non-transfected: sc-117752 (**A**) and human PP2B-Aβ transfected: sc-114729 (**B**) 293T whole cell lysates.



PP2B-Aβ (A-11): sc-365612. Western blot analysis of PP2B-Aβ expression in human brain tissue extract.

SELECT PRODUCT CITATIONS

1. Kecskés, M., et al. 2015. The Ca^{2+}-activated cation channel TRPM4 is a negative regulator of Angiotensin II-induced cardiac hypertrophy. Basic Res. Cardiol. 110: 43.
2. Li, J., et al. 2019. Muscle A-kinase-anchoring protein-β-bound calcineurin toggles active and repressive transcriptional complexes of myocyte en-hancer factor 2D. J. Biol. Chem. 294: 2543-2554.
3. Zhang, X., et al. 2021. Wip1 controls the translocation of the chromosomal passenger complex to the central spindle for faithful mitotic exit. Cell. Mol. Life Sci. 78: 2821-2838.

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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA