

PP2B-A α (D-9): sc-17808

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-A α , PP2B-A β and PP2B-A γ . Two additional regulatory subunits have been identified, designated PP2B-B1 and PP2B-B2.

CHROMOSOMAL LOCATION

Genetic locus: PPP3CA (human) mapping to 4q24; Ppp3ca (mouse) mapping to 3 G3.

SOURCE

PP2B-A α (D-9) is a mouse monoclonal antibody raised against amino acids 312-521 of PP2B-A α .

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PP2B-A α (D-9) is available conjugated to agarose (sc-17808 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17808 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17808 PE), fluorescein (sc-17808 FITC), Alexa Fluor® 488 (sc-17808 AF488), Alexa Fluor® 546 (sc-17808 AF546), Alexa Fluor® 594 (sc-17808 AF594) or Alexa Fluor® 647 (sc-17808 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17808 AF680) or Alexa Fluor® 790 (sc-17808 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PP2B-A α (D-9) is recommended for detection of PP2B-A α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:2,000), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). PP2B-A α (D-9) is also recommended for detection of PP2B-A α in additional species, including equine and canine.

Suitable for use as control antibody for PP2B-A α siRNA (h): sc-36304, PP2B-A α siRNA (m): sc-36303, PP2B-A α shRNA Plasmid (h): sc-36304-SH, PP2B-A α shRNA Plasmid (m): sc-36303-SH, PP2B-A α shRNA (h) Lentiviral Particles: sc-36304-V and PP2B-A α shRNA (m) Lentiviral Particles: sc-36303-V.

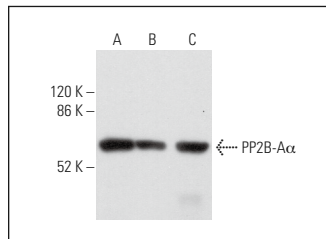
Molecular Weight of PP2B-A α : 56 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or EOC 20 whole cell lysate: sc-364187.

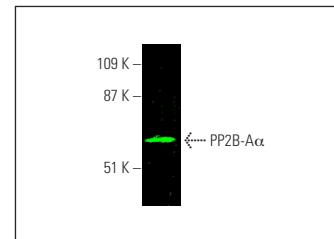
STORAGE

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

DATA



PP2B-A α (D-9): sc-17808. Western blot analysis of PP2B-A α expression in mouse brain (A), human cerebral cortex (B) and rat brain (C) tissue extracts. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



PP2B-A α (D-9): sc-17808. Near-infrared western blot analysis of PP2B-A α expression in EOC 20 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

- Luo, Z., et al. 2010. Pin1 facilitates the phosphorylation-dependent ubiquitination of SF-1 to regulate gonadotropin β -subunit gene transcription. *Mol. Cell. Biol.* 30: 745-763.
- Herum, K.M., et al. 2013. Syndecan-4 signaling via NFAT regulates extracellular matrix production and cardiac myofibroblast differentiation in response to mechanical stress. *J. Mol. Cell. Cardiol.* 54: 73-81.
- Nakamura, T., et al. 2016. Overexpression of C16orf74 is involved in aggressive pancreatic cancers. *Oncotarget* 8: 50460-50475.
- Goshima, T., et al. 2019. Calcineurin regulates cyclin D1 stability through dephosphorylation at T286. *Sci. Rep.* 9: 12779.
- Foley, T.D., et al. 2020. The reducible disulfide proteome of synaptosomes supports a role for reversible oxidations of protein thiols in the maintenance of neuronal redox homeostasis. *Neurochem. Res.* 45: 1825-1838.
- Diering, S., et al. 2020. Receptor-independent modulation of cAMP-dependent protein kinase and protein phosphatase signaling in cardiac myocytes by oxidizing agents. *J. Biol. Chem.* 295: 15342-15365.
- Li, S., et al. 2021. The role of PKA/PP2B-mediated Drp1 phosphorylation and the subsequent EGFR inhibition in Cr(VI)-induced premature senescence. *Ecotoxicol. Environ. Saf.* 218: 112300.
- Mohamud, Y., et al. 2021. Coxsackievirus B3 targets TFEB to disrupt lysosomal function. *Autophagy* 17: 3924-3938.
- Pan, R., et al. 2022. CAMTA1-PPP3CA-NFATc4 multi-protein complex mediates the resistance of colorectal cancer to oxaliplatin. *Cell Death Discov.* 8: 129.

RESEARCH USE

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

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