SANTA CRUZ BIOTECHNOLOGY, INC.

PP2B-B1/2 (D-1): sc-373803

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.

CHROMOSOMAL LOCATION

Genetic locus: PPP3R1 (human) mapping to 2p14, PPP3R2 (human) mapping to 9q31.1.

SOURCE

PP2B-B1/2 (D-1) is a mouse monoclonal antibody raised against amino acids 1-170 representing full length PP2B-B2 of human origin.

PRODUCT

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

PP2B-B1/2 (D-1) is available conjugated to agarose (sc-373803 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-373803 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373803 PE), fluorescein (sc-373803 FITC), Alexa Fluor® 488 (sc-373803 AF488), Alexa Fluor® 546 (sc-373803 AF546), Alexa Fluor® 594 (sc-373803 AF594) or Alexa Fluor® 647 (sc-373803 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373803 AF680) or Alexa Fluor® 790 (sc-373803 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

PP2B-B1/2 (D-1) is recommended for detection of PP2B-B1 and PP2B-B2 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of PP2B-B1: 19 kDa.

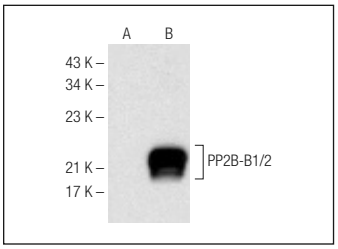
Molecular Weight of PP2B-B2: 21 kDa.

Positive Controls: human PP2B-B1/2 transfected HEK293T whole cell lysate or A-431 whole cell lysate: sc-2201.

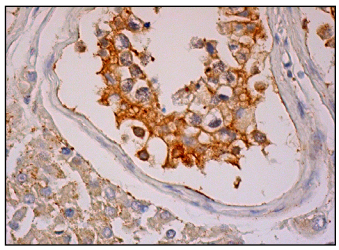
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PP2B-B1/2 (D-1): sc-373803. Western blot analysis of PP2B-B1/2 expression in non-transfected (**A**) and human PP2B-B1/2 transfected (**B**) HEK293T whole cell lysates.



PP2B-B1/2 (D-1): sc-373803. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Gergs, U., et al. 2019. Age-dependent protein expression of serine/ threonine phosphatases and their inhibitors in the human cardiac atrium. Adv. Med. 2019: 2675972.
2. Ozay, E.I., et al. 2020. Cell-penetrating anti-protein kinase C θ antibodies act intracellularly to generate stable, highly suppressive regulatory T cells. Mol. Ther. 28: 1987-2006.
3. Hsu, C.C., et al. 2021. Inositol serves as a natural inhibitor of mitochondrial fission by directly targeting AMPK. Mol. Cell 81: 3803-3819.e7.

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.