SANTA CRUZ BIOTECHNOLOGY, INC.

PP6 (E-2): sc-393294

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. PP6 (protein phosphatase 6), also known as PPP6C, is a 305 amino acid cytoplasmic protein that belongs to the PPP phosphatase family. Ubiquitously expressed, PP6 is component of a signaling pathway regulating cell cycle progression in response to IL-2 receptor stimulation and is involved in suppressing inflammatory responses by specifically down-regulating TR4.

REFERENCES

1. Huang, X. and Honkanen, R.E. 1998. Molecular cloning, expression, and characterization of a novel human serine/threonine protein phosphatase, PP7, that is homologous to *Drosophila* retinal degeneration C gene product (rdgC). J. Biol. Chem. 273: 1462-1468.
2. Honkanen, R.E. and Golden, T. 2002. Regulators of serine/threonine protein phosphatases at the dawn of a clinical era? Curr. Med. Chem. 9: 2055-2075.
3. Goshima, G., et al. 2003. The role of Ppe1/PP6 phosphatase for equal chromosome segregation in fission yeast kinetochore. EMBO J. 22: 2752-2763.

CHROMOSOMAL LOCATION

Genetic locus: PPP6C (human) mapping to 9q33.3; Ppp6c (mouse) mapping to 2 B.

SOURCE

PP6 (E-2) is a mouse monoclonal antibody raised against amino acids 266-305 mapping at the C-terminus of PP6 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.

PP6 (E-2) is available conjugated to agarose (sc-393294 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393294 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393294 PE), fluorescein (sc-393294 FITC), Alexa Fluor® 488 (sc-393294 AF488), Alexa Fluor® 546 (sc-393294 AF546), Alexa Fluor® 594 (sc-393294 AF594) or Alexa Fluor® 647 (sc-393294 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393294 AF680) or Alexa Fluor® 790 (sc-393294 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PP6 (E-2) is recommended for detection of PP6 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).

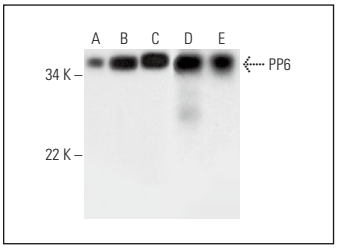
PP6 (E-2) is also recommended for detection of PP6 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PP6 siRNA (h): sc-76205, PP6 siRNA (m): sc-76206, PP6 shRNA Plasmid (h): sc-76205-SH, PP6 shRNA Plasmid (m): sc-76206-SH, PP6 shRNA (h) Lentiviral Particles: sc-76205-V and PP6 shRNA (m) Lentiviral Particles: sc-76206-V.

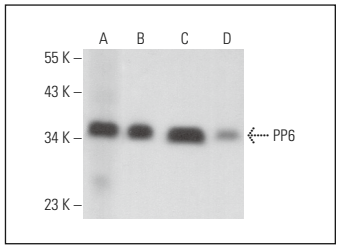
Molecular Weight of PP6: 36 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

DATA



PP6 (E-2): sc-393294. Western blot analysis of PP6 expression in NTERA-2 cl.D1 (**A**), HeLa (**B**) and Jurkat (**C**) whole cell lysates and mouse thymus (**D**) and rat thymus (**E**) tissue extracts.



PP6 (E-2): sc-393294. Western blot analysis of PP6 expression in human fetal thymus tissue extract (**A**) and NIH/3T3 (**B**), PC-12 (**C**) and L6 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ohba, S., et al. 2020. Phosphoglycerate mutase 1 activates DNA damage repair via regulation of WIP1 activity. Cell Rep. 31: 107518.
2. Labbé, J.C., et al. 2021. The study of the determinants controlling Arpp19 phosphatase-inhibitory activity reveals an Arpp19/PP2A-B55 feedback loop. Nat. Commun. 12: 3565.
3. Sakaguchi, M., et al. 2022. Phosphatase protector alpha4 (α4) is involved in adipocyte maintenance and mitochondrial homeostasis through regulation of Insulin signaling. Nat. Commun. 13: 6092.
4. Lin, Z., et al. 2023. Cathepsin B S-nitrosylation promotes ADAR1-mediated editing of its own mRNA transcript via an ADD1/MATR3 regulatory axis. Cell Res. 33: 546-561.

STORAGE

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