SANTA CRUZ BIOTECHNOLOGY, INC.

PPP2R5E (H-82): sc-135223

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. PPP2R5E (protein phosphatase 2, regulatory subunit B', ε isoform) is a 467 amino acid protein that localizes to the cytoplasm and exists as an isoform of the B regulatory subunit within the PP multimeric complex. Functioning as a regulatory subunit, PPP2R5E is thought to modulate both the catalytic activity and the substrate specificity of the PP holoenzyme and may also be responsible for the localization of the complex to subcellular compartments.

REFERENCES

1. McCright, B., et al. 1995. Identification of a new family of protein phosphatase 2A regulatory subunits. J. Biol. Chem. 270: 26123-26128.
2. McCright, B., et al. 1996. Assignment of human protein phosphatase 2A regulatory subunit genes b56α, b56β, b56γ, b56δ, and b56ε (PPP2R5A-PPP2R5E), highly expressed in muscle and brain, to chromosome regions 1q41, 11q12, 3p21, 6p21.1, and 7p11.2 → p12. Genomics 36: 168-170.
3. McCright, B., et al. 1996. The B56 family of protein phosphatase 2A (PP2A) regulatory subunits encodes differentiation-induced phosphoproteins that target PP2A to both nucleus and cytoplasm. J. Biol. Chem. 271: 22081-22089.
4. Dozier, C., et al. 2004. Regulation of Chk2 phosphorylation by interaction with protein phosphatase 2A via its B' regulatory subunit. Biol. Cell 96: 509-517.
5. Ammosova, T., et al. 2005. Dephosphorylation of CDK9 by protein phosphatase 2A and protein phosphatase-1 in Tat-activated HIV-1 transcription. Retrovirology 2: 47.
6. Sablina, A.A., et al. 2007. The tumor suppressor PP2A Aβ regulates the RalA GTPase. Cell 129: 969-982.
7. Goudreault, M., et al. 2009. A PP2A phosphatase high density interaction network identifies a novel striatin-interacting phosphatase and kinase complex linked to the cerebral cavernous malformation 3 (CCM3) protein. Mol. Cell. Proteomics 8: 157-171.
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CHROMOSOMAL LOCATION

Genetic locus: PPP2R5E (human) mapping to 14q23.2; Ppp2r5e (mouse) mapping to 12 C3.

SOURCE

PPP2R5E (H-82) is a rabbit polyclonal antibody raised against amino acids 183-264 mapping within an internal region of PPP2R5E of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PPP2R5E (H-82) is recommended for detection of PPP2R5E of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

PPP2R5E (H-82) is also recommended for detection of PPP2R5E in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PPP2R5E siRNA (h): sc-92446, PPP2R5E siRNA (m): sc-152427, PPP2R5E shRNA Plasmid (h): sc-92446-SH, PPP2R5E shRNA Plasmid (m): sc-152427-SH, PPP2R5E shRNA (h) Lentiviral Particles: sc-92446-V and PPP2R5E shRNA (m) Lentiviral Particles: sc-152427-V.

Molecular Weight of PPP2R5E: 55 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.