

PP2A-A α (C-20): sc-6112

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 subunits have been identified, designated PP1, PP2A, PP2B (calcineurin) and PP2C. The PP2A family comprises subfamily members PP2A α and PP2A β . An additional protein phosphatase catalytic subunit, PPX (also known as PP4) is a putative member of a novel PP family. The PP2A catalytic subunit associates with a variety of regulatory subunits. Regulatory subunits include PP2A-A α and -A β , PP2A-B α and -B β , PP2A-C α and -C β , PP2A-B56 α and -B56 β .

CHROMOSOMAL LOCATION

Genetic locus: PPP2R1A (human) mapping to 19q13.41; Ppp2r1a (mouse) mapping to 17 A3.2.

SOURCE

PP2A-A α (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PP2A-A α of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6112 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PP2A-A α (C-20) is recommended for detection of PP2A-A α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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), 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); may cross react with PP2A-A β .

PP2A-A α (C-20) is also recommended for detection of PP2A-A α in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PP2A-A α siRNA (h): sc-44033, PP2A-A α siRNA (m): sc-39178, PP2A-A α shRNA Plasmid (h): sc-44033-SH, PP2A-A α shRNA Plasmid (m): sc-39178-SH, PP2A-A α shRNA (h) Lentiviral Particles: sc-44033-V and PP2A-A α shRNA (m) Lentiviral Particles: sc-39178-V.

Molecular Weight of PP2A-A α : 55 kDa.

Molecular Weight of PP2A-A β : 65 kDa.

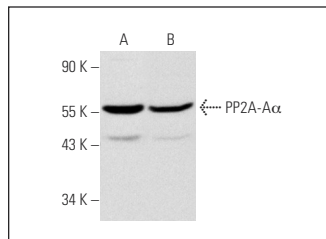
RESEARCH USE

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

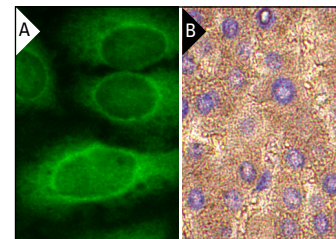
STORAGE

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

DATA



PP2A-A α (C-20): sc-6112. Western blot analysis of PP2A-A α expression in H4 (A) and NIH/3T3 (B) whole cell lysates.



PP2A-A α (C-20): sc-6112. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

SELECT PRODUCT CITATIONS

- Fan, G.H., et al. 2001. Phosphorylation-independent association of CXCR2 with the protein phosphatase 2A core enzyme. *J. Biol. Chem.* 276: 16960-16968.
- Shanley, T.P., et al. 2001. The serine/threonine phosphatase, PP2A: endogenous regulator of inflammatory cell signaling. *J. Immunol.* 166: 966-972.
- Luo, W. and Dou, F. 2007. Roles of heat-shock protein 90 in maintaining and facilitating the neurodegenerative phenotype in tauopathies. *Proc. Natl. Acad. Sci. USA* 104: 9511-9516.
- Zuluaga, S., et al. 2007. Negative regulation of Akt activity by p38 α MAP kinase in cardiomyocytes involves membrane localization of PP2A through interaction with caveolin-1. *Cell. Signal.* 19: 62-74.
- Sotillo, E., et al. 2008. Cyclin E and SV40 small T antigen cooperate to bypass quiescence and contribute to transformation by activating CDK2 in human fibroblasts. *J. Biol. Chem.* 283: 11280-11292.
- Lee, T.Y., et al. 2010. The B56 γ 3 regulatory subunit of protein phosphatase 2A (PP2A) regulates S phase-specific nuclear accumulation of PP2A and the G₁ to S transition. *J. Biol. Chem.* 285: 21567-21580.
- Khammanivong, A., et al. 2013. S100A8/A9 (calprotectin) negatively regulates G₂/M cell cycle progression and growth of squamous cell carcinoma. *PLoS ONE* 8: e69395.

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