

I2PP2A (H-120): sc-25564

BACKGROUND

Protein phosphatase 2A (PP2A) is a major mammalian protein serine/threonine phosphatase that regulates diverse cellular processes. Inhibitor 1 of PP2A (I1PP2A) and inhibitor 2 of PP2A (I2PP2A), which share large sequence similarity, are heat-stable protein inhibitors of the cellular phosphatase activity of PP2A. I1PP2A and I2PP2A were initially characterized as putative HLA class II associated proteins Phap I and Phap II. These inhibitor proteins act noncompetitively to selectively inhibit PP2A, but do not affect the phosphatase activity of the related proteins PP1, PP2B and PP2C. The I1PP2A protein is localized to both the cytoplasm and the nucleus. In contrast, I2PP2A is located predominantly in the nucleus and is highly expressed in Wilms' tumor cells. Transient expression of I2PP2A in HEK-293 cells leads to an increase in the DNA binding activity of the proto-oncogene c-Jun.

CHROMOSOMAL LOCATION

Genetic locus: SET (human) mapping to 9q34.11; Set (mouse) mapping to 2 B.

SOURCE

I2PP2A (H-120) is a rabbit polyclonal antibody raised against amino acids 1-120 of I2PP2A 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

I2PP2A (H-120) is recommended for detection of I2PP2A 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), 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).

I2PP2A (H-120) is also recommended for detection of I2PP2A in additional species, including equine and canine.

Suitable for use as control antibody for I2PP2A siRNA (h): sc-43856, I2PP2A siRNA (m): sc-44385, I2PP2A siRNA (r): sc-106998, I2PP2A shRNA Plasmid (h): sc-43856-SH, I2PP2A shRNA Plasmid (m): sc-44385-SH, I2PP2A shRNA Plasmid (r): sc-106998-SH, I2PP2A shRNA (h) Lentiviral Particles: sc-43856-V, I2PP2A shRNA (m) Lentiviral Particles: sc-44385-V and I2PP2A shRNA (r) Lentiviral Particles: sc-106998-V.

Molecular Weight of I2PP2A: 39 kDa.

Positive Controls: Ramos cell lysate: sc-2216, SK-N-MC cell lysate: sc-2237 or KNRK whole cell lysate: sc-2214.

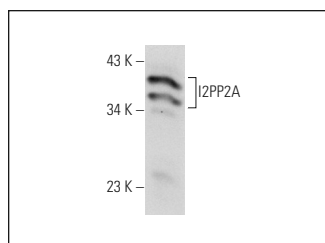
STORAGE

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

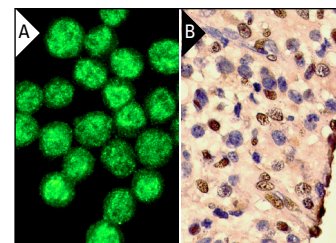
RESEARCH USE

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

DATA



I2PP2A (H-120): sc-25564. Western blot analysis of I2PP2A expression in Ramos whole cell lysate.



I2PP2A (H-120): sc-25564. Immunofluorescence staining of methanol-fixed Ramos cells showing nuclear and cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tumor showing nuclear localization in selected cells (B).

SELECT PRODUCT CITATIONS

1. Spector, D.J. 2007. Default assembly of early adenovirus chromatin. *Virology* 359: 116-125.
2. Hu, Z., et al. 2009. Synergy between proteasome inhibitors and imatinib mesylate in chronic myeloid leukemia. *PLoS ONE* 4: e6257.
3. Roberts, K.G., et al. 2010. Essential requirement for PP2A inhibition by the oncogenic receptor c-KIT suggests PP2A reactivation as a strategy to treat c-KIT⁺ cancers. *Cancer Res.* 70: 5438-5447.
4. Leung, J.W., et al. 2011. SET nuclear oncogene associates with microcephalin/MCPH1 and regulates chromosome condensation. *J. Biol. Chem.* 286: 21393-21400.
5. de Kreuk, B.J., et al. 2011. The F-BAR domain protein PACSIN2 associates with Rac1 and regulates cell spreading and migration. *J. Cell Sci.* 124: 2375-2388.
6. Fanis, P., et al. 2012. Five friends of methylated chromatin target of protein-arginine-methyltransferase[prmt]-1 (chttop), a complex linking arginine methylation to desumoylation. *Mol. Cell. Proteomics* 11: 1263-1273.
7. Yu, G., et al. 2013. Ser9 phosphorylation causes cytoplasmic detention of I2PP2A/SET in Alzheimer disease. *Neurobiol. Aging* 34: 1748-1758.
8. Lam, B.D., et al. 2013. Cytoplasmic targeting of the proto-oncogene SET promotes cell spreading and migration. *FEBS Lett.* 587: 111-119.
9. Chae, Y.C., et al. 2014. Inhibition of FoxO1 acetylation by INHAT subunit SET/TAF-1β induces p21 transcription. *FEBS Lett.* 588: 2867-2873.

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Try **I2PP2A (F-9): sc-133138**, our highly recommended monoclonal alternative to I2PP2A (H-120).