12PP2A (h): 293T Lysate: sc-115323



The Power to Question

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.

REFERENCES

- Guo, H. and Damuni, Z. 1993. Autophosphorylation-activated protein kinase phosphorylates and inactivates protein phosphatase 2A. Proc. Natl. Acad. Sci. USA 90: 2500-2504.
- Damuni, Z., Xiong, H. and Li, M. 1994 Autophosphorylation-activated protein kinase inactivates the protein tyrosine phosphatase activity of protein phosphatase 2A. FEBS Lett. 352: 311-314.
- 3. Li, M., Guo, H. and Damuni, Z. 1995. Purification and characterization of two potent heat-stable protein inhibitors of protein phosphatase 2A from bovine kidney. Biochemistry 34: 1988-1996.
- Li, M., Makkinje, A. and Damuni, Z. 1996. Molecular identification of I1PP2A, a novel potent heat-stable inhibitor protein of protein phosphatase 2A. Biochemistry 35: 6998-7002.
- Li, M., Makkinje, A. and Damuni, Z. 1996. The myeloid leukemia-associated protein SET is a potent inhibitor of protein phosphatase 2A. J. Biol. Chem. 271: 11059-11062.
- 6. Li, M. and Damuni, Z. 1998. I1PP2A and I2PP2A. Two potent protein phosphatase 2A-specific inhibitor proteins. Methods Mol. Biol. 93: 59-66.
- 7. Carlson, S.G., Eng, E., Kim, E.G., Perlman, E.J., Copeland T.D. and Ballermann, B.J. 1998. Expression of SET, an inhibitor of protein phosphatase 2A, in renal development and Wilms' tumor. J. Am. Soc. Nephrol. 9: 1873-1880.
- Al-Murrani, S.W., Woodgett, J.R. and Damuni, Z. 1999. Expression of I2PP2A, an inhibitor of protein phosphatase 2A, induces c-Jun and AP-1 activity. Biochem. J. 341: 293-298.

CHROMOSOMAL LOCATION

Genetic locus: SET (human) mapping to 9q34.11.

PRODUCT

I2PP2A (h): 293T Lysate represents a lysate of human I2PP2A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

I2PP2A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive I2PP2A antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

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