

I2PP2A (E-15): sc-5655

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, SETP20 (human) mapping to 4q25; Set (mouse) mapping to 2 B.

SOURCE

I2PP2A (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-5655 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

I2PP2A (E-15) is recommended for detection of I2PP2A and LOC389217 of human origin and I2PP2A of mouse and rat 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 (E-15) is also recommended for detection of I2PP2A and LOC389217 in additional species, including equine, canine, bovine, porcine and avian.

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

Molecular Weight of I2PP2A: 39 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Ramos cell lysate: sc-2216 or KNRK nuclear extract: sc-2141.

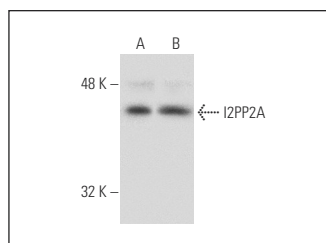
STORAGE

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

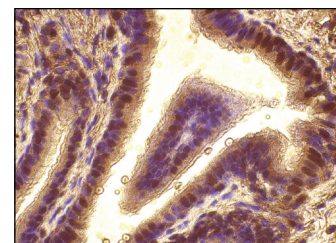
RESEARCH USE

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

DATA



I2PP2A (E-15): sc-5655. Western blot analysis of I2PP2A expression in Jurkat (A) and K-562 (B) nuclear extracts.



I2PP2A (E-15): sc-5655. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing strong nuclear and moderate cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Neviani, P., et al. 2005. The tumor suppressor PP2A is functionally inactivated in blast crisis CML through the inhibitory activity of the BCR/ABL-regulated SET protein. *Cancer Cell* 8: 355-368.
- Ouellet, V., et al. 2006. SET complex in serous epithelial ovarian cancer. *Int. J. Cancer* 119: 2119-2126.
- ten Klooster, J.P., et al. 2007. Rac1-induced cell migration requires membrane recruitment of the nuclear oncogene SET. *EMBO J.* 26: 336-345.
- Ouellet, V., et al. 2008. Immunohistochemical profiling of benign, low malignant potential and low grade serous epithelial ovarian tumors. *BMC Cancer* 8: 346.
- Cristóbal, I., et al. 2010. SETBP1 overexpression is a novel leukemogenic mechanism that predicts adverse outcome in elderly patients with acute myeloid leukemia. *Blood* 115: 615-625.
- Antony, R., et al. 2010. Neuroprotectin D1 induces dephosphorylation of Bcl-x_L in a PP2A-dependent manner during oxidative stress and promotes retinal pigment epithelial cell survival. *J. Biol. Chem.* 285: 18301-18308.
- Shi, H., et al. 2011. Proteomic analysis of advanced colorectal cancer by laser capture microdissection and two-dimensional difference gel electrophoresis. *J. Proteomics* 75: 339-351.
- Amodio, G., et al. 2011. Proteomic signatures in thapsigargin-treated hepatoma cells. *Chem. Res. Toxicol.* 24: 1215-1222.
- Christensen, D.J., et al. 2011. SET oncoprotein overexpression in B-cell chronic lymphocytic leukemia and non-Hodgkin lymphoma: a predictor of aggressive disease and a new treatment target. *Blood* 118: 4150-4158.



Try **I2PP2A (F-9): sc-133138**, our highly recommended monoclonal alternative to I2PP2A (E-15).