

ANP32A (C-18): sc-5652



The Power to Question

BACKGROUND

Protein phosphatase 2A PP2A is a major mammalian protein serine/threonine phosphatase that regulates diverse cellular processes. ANP32A, also known as 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. ANP32A 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 ANP32A 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: ANP32A (human) mapping to 15q23; Anp32a (mouse) mapping to 9 B.

SOURCE

ANP32A (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ANP32A 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.

ANP32A (C-18) is available conjugated to agarose (sc-5652 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-5652 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ANP32A (C-18) is recommended for detection of ANP32A 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).

ANP32A (C-18) is also recommended for detection of ANP32A in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for I1PP2A siRNA (h): sc-40696, I1PP2A siRNA (m): sc-40697, I1PP2A shRNA Plasmid (h): sc-40696-SH, I1PP2A shRNA Plasmid (m): sc-40697-SH, I1PP2A shRNA (h) Lentiviral Particles: sc-40696-V and I1PP2A shRNA (m) Lentiviral Particles: sc-40697-V.

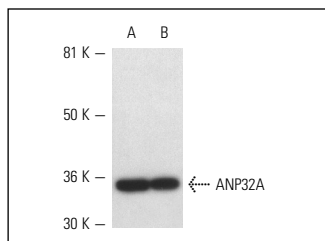
Molecular Weight of ANP32A: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, LNCaP cell lysate: sc-2231 or Caki-1 cell lysate: sc-2224.

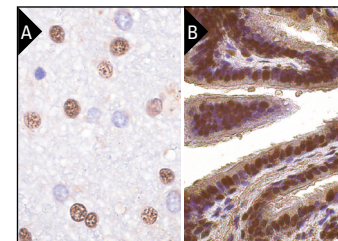
STORAGE

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

DATA



ANP32A (C-18): sc-5652. Western blot analysis of ANP32A expression in LNCaP (A) and Caki-1 (B) whole cell lysates.



ANP32A (C-18): sc-5652. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human brain tumor showing nuclear staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing strong nuclear and weak cytoplasmic staining of respiratory epithelial cells (B).

SELECT PRODUCT CITATIONS

- Hill, M.M., et al. 2004. Analysis of the composition, assembly kinetics and activity of native Apaf-1 apoptosomes. *EMBO J.* 23: 2134-2145.
- Yu, L.G., et al. 2004. Protein phosphatase 2A, a negative regulator of the ERK signaling pathway, is activated by tyrosine phosphorylation of putative HLA class II-associated protein I (PHAPI)/pp32 in response to the antiproliferative lectin, jacalin. *J. Biol. Chem.* 279: 41377-41383.
- Zippo, A., et al. 2004. Identification of Flk-1-target genes in vasculogenesis: Pim-1 is required for endothelial and mural cell differentiation *in vitro*. *Blood* 103: 4536-4544.
- 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.
- Kadota, S. and Nagata, K. 2011. pp32, an INHAT component, is a transcription machinery recruiter for maximal induction of IFN-stimulated genes. *J. Cell Sci.* 124: 892-899.
- Schramedei, K., et al. 2011. MicroRNA-21 targets tumor suppressor genes ANP32A and SMARCA4. *Oncogene* 30: 2975-2985.
- Yu, Y., et al. 2012. Acidic leucine-rich nuclear phosphoprotein 32 family member B (ANP32B) contributes to retinoic acid-induced differentiation of leukemic cells. *Biochem. Biophys. Res. Commun.* 423: 721-725.

RESEARCH USE

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



Try **ANP32A/B (A-2): sc-374552** or **ANP32A (A-182): sc-100767**, our highly recommended monoclonal alternatives to ANP32A (C-18).