

ANP32A (A-182): sc-100767

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.

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., et al. 1994. Autophosphorylation-activated protein kinase inactivates the protein tyrosine phosphatase activity of protein phosphatase 2A. *FEBS Lett.* 352: 311-314.

CHROMOSOMAL LOCATION

Genetic locus: ANP32A (human) mapping to 15q23.

SOURCE

ANP32A (A-182) is a mouse monoclonal antibody raised against recombinant ANP32A of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ANP32A (A-182) is recommended for detection of ANP32A of 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).

Suitable for use as control antibody for ANP32A siRNA (h): sc-40696, ANP32A shRNA Plasmid (h): sc-40696-SH and ANP32A shRNA (h) Lentiviral Particles: sc-40696-V.

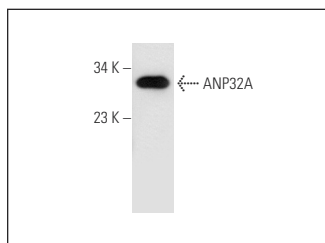
Molecular Weight of ANP32A: 29 kDa.

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

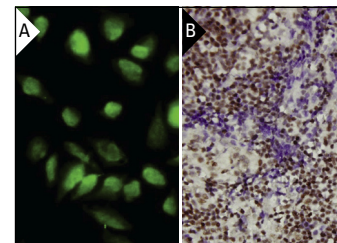
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ANP32A (A-182): sc-100767. Western blot analysis of ANP32A expression in LNCaP whole cell lysate.



ANP32A (A-182): sc-100767. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Shi, T., et al. 2013. Novel proteins associated with human dilated cardiomyopathy: selective reduction in α_{1A} -adrenergic receptors and increased desensitization proteins. *J. Recept. Signal Transduct. Res.* 33: 96-106.
- Batra, J., et al. 2018. Protein interaction mapping identifies RBBP6 as a negative regulator of Ebola virus replication. *Cell* 175: 1917-1930.e13.
- Park, Y.H., et al. 2020. Host-specific restriction of avian influenza virus caused by differential dynamics of ANP32 family members. *J. Infect. Dis.* 221: 71-80.
- Feng, Q., et al. 2020. MAPT/Tau accumulation represses autophagy flux by disrupting IST1-regulated ESCRT-III complex formation: a vicious cycle in Alzheimer neurodegeneration. *Autophagy* 16: 641-658.
- Park, Y.H., et al. 2021. Asp149 and Asp152 in chicken and human ANP32A play an essential role in the interaction with influenza viral polymerase. *FASEB J.* 35: e21630.

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.