

ANP32A/B (A-2): sc-374552

BACKGROUND

Protein phosphatase 2A (PP2A) is a major mammalian serine/threonine phosphatase that regulates diverse cellular processes. ANP32A, also known as inhibitor 1 of PP2A (I1PP2A) is a heat-stable cytoplasmic and nuclear protein that functions as an inhibitor of cellular PP2A phosphatase activity. ANP32B (acidic (leucine-rich) nuclear phosphoprotein 32 family, member B), also designated PHAPI2, SSP29 or APRIL, is a 251 amino acid protein that localizes to the nucleus and contains four LRR (leucine-rich repeat) motifs. Expressed in placenta, heart, pancreas, lung, prostate, spleen and thymus, ANP32B exists as a multifunctional protein that plays an essential role in cell cycle progression and cell survival and is required for the G₁ to S phase transition. Additionally, ANP32B functions as an anti-apoptotic factor that inhibits the activity of caspase-3, a protein that is crucial for the successful execution of apoptotic events.

REFERENCES

- Guo, H., et al. 1993. Autophosphorylation-activated protein kinase phosphorylates and inactivates protein phosphatase 2A. *Proc. Natl. Acad. Sci. USA* 90: 2500-2504.
- Li, M., et al. 1996. Molecular identification of I1PP2A, a novel potent heat-stable inhibitor protein of protein phosphatase 2A. *Biochemistry* 35: 6998-7002.
- Li, M., et al. 1998. I1PP2A and I2PP2A. Two potent protein phosphatase 2A-specific inhibitor proteins. *Methods Mol. Biol.* 93: 59-66.
- Jiang, X., et al. 2003. Distinctive roles of PHAP proteins and prothymosin- α in a death regulatory pathway. *Science* 299: 223-226.

CHROMOSOMAL LOCATION

Genetic locus: ANP32A (human) mapping to 15q23, ANP32B (human) mapping to 9q22.33; Anp32a (mouse) mapping to 9 B, Anp32b (mouse) mapping to 4 B1.

SOURCE

ANP32A/B (A-2) is a mouse monoclonal antibody raised against amino acids 1-163 mapping at the N-terminus of ANP32B of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ANP32A/B (A-2) is available conjugated to agarose (sc-374552 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374552 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374552 PE), fluorescein (sc-374552 FITC), Alexa Fluor[®] 488 (sc-374552 AF488), Alexa Fluor[®] 546 (sc-374552 AF546), Alexa Fluor[®] 594 (sc-374552 AF594) or Alexa Fluor[®] 647 (sc-374552 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374552 AF680) or Alexa Fluor[®] 790 (sc-374552 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ANP32A/B (A-2) is recommended for detection of ANP32A and ANP32B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

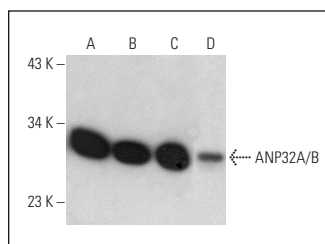
Molecular Weight of ANP32A/B: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Raji whole cell lysate: sc-364236 or LNCaP cell lysate: sc-2231.

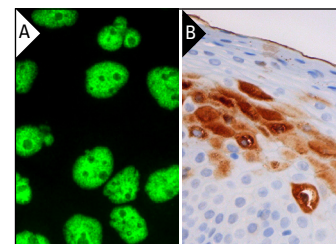
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ANP32A/B (A-2): sc-374552. Western blot analysis of ANP32A/B expression in LNCaP (A), HeLa (B), Raji (C) and C6 (D) whole cell lysates.



ANP32A/B (A-2): sc-374552. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Bui, P.L., et al. 2019. Template activating factor-1 α regulates retroviral silencing during reprogramming. *Cell Rep.* 29: 1909-1922.e5.

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.