SANTA CRUZ BIOTECHNOLOGY, INC.

Nucling (A-4): sc-514117

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Nucling, also known as UACA (uveal autoantigen with coiled-coil domains and ankyrin repeats) and KIAA1561, is a 1,416 amino acid nuclear and cytoplasmic protein. Upregulated after TSH-stimulation, Nucling is a component of the apoptosome complex, whose other components include Apaf-1 and caspase-9. Nucling interacts directly with Apaf-1 and regulates it's redistribution to the nucleus following proapoptotic stress. Nucling also plays a role in the promotion of apoptosis by the galectin-3 downregulation, apoptosome upregulation and NFκB inactivation pathways. Nucling also interacts with ARF6, which may modulate cell shape and motility following injury. Nucling contains six ANK repeats and is expressed highly in kidney, heart, pancreas and skeletal muscle. Nucling is a potential target autoantigen in Behcet disease (BD), Vogt-Koyanagi-Harada (VKH) and sarcoidosis, which cause different types of panuevitis.

REFERENCES

1. Yamada, K., et al. 2001. Identification of a novel autoantigen UACA in patients with panuveitis. Biochem. Biophys. Res. Commun. 280: 1169-1176.
2. Ohkura, T., et al. 2004. Detection of the novel autoantibody (anti-UACA antibody) in patients with Graves' disease. Biochem. Biophys. Res. Commun. 321: 432-440.
3. Brandenberger, R., et al. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. Nat. Biotechnol. 22: 707-716.
4. Bouwmeester, T., et al. 2004. A physical and functional map of the human TNF-α/NFκB signal transduction pathway. Nat. Cell Biol. 6: 97-105.
5. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Natl. Acad. Sci. USA 101: 12130-12135.

CHROMOSOMAL LOCATION

Genetic locus: UACA (human) mapping to 15q23; Uaca (mouse) mapping to 9 B.

SOURCE

Nucling (A-4) is a mouse monoclonal antibody raised against amino acids 301-600 mapping within an internal region of Nucling of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nucling (A-4) is available conjugated to agarose (sc-514117 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514117 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514117 PE), fluorescein (sc-514117 FITC), Alexa Fluor® 488 (sc-514117 AF488), Alexa Fluor® 546 (sc-514117 AF546), Alexa Fluor® 594 (sc-514117 AF594) or Alexa Fluor® 647 (sc-514117 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514117 AF680) or Alexa Fluor® 790 (sc-514117 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nucling (A-4) is recommended for detection of Nucling of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nucling siRNA (h): sc-90147, Nucling siRNA (m): sc-150095, Nucling shRNA Plasmid (h): sc-90147-SH, Nucling shRNA Plasmid (m): sc-150095-SH, Nucling shRNA (h) Lentiviral Particles: sc-90147-V and Nucling shRNA (m) Lentiviral Particles: sc-150095-V.

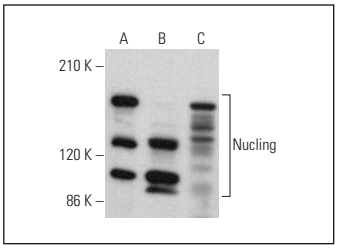
Molecular Weight of Nucling: 160 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, A-10 cell lysate: sc-3806 or MIA PaCa-2 cell lysate: sc-2285.

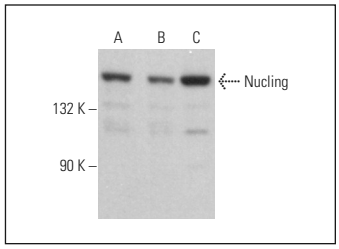
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Nucling (A-4): sc-514117. Western blot analysis of Nucling expression in MIA PaCa-2 (**A**), HEK293T (**B**) and NIH/3T3 (**C**) whole cell lysates.



Nucling (A-4): sc-514117. Western blot analysis of Nucling expression in A-10 (**A**), Sol8 (**B**) and SJRH30 (**C**) whole cell lysates.

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.

PROTOCOLS

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