SANTA CRUZ BIOTECHNOLOGY, INC.

NIPA (H-300): sc-134601

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Entry into mitosis is essentially driven by cyclin B1, which is located in the cytoplasm throughout interphase, but accumulates in the nucleus just before mitosis occurs. Nuclear interaction partner of ALK (NIPA) plays a critical role in cyclin B1 regulation. NIPA is normally phosphorylated during G_2 and M phases, resulting in an accumulation of cyclin B1. When NIPA sheds its attached phosphate, it binds to SCF to form the SCFNIPA complex, a member of the E3 ubiquitin ligases, which ubiquitinates cyclin B1, thereby targeting it to the proteosome for degradation. Therefore, the accumulation of cyclin B1 is due to the inability of phosphorylated NIPA to bind to the molecule SCF, thereby preventing the degradation of cyclin B1. An absence of NIPA causes cyclin B1 to accumulate abnormally, leading to premature mitotic entry, loss of checkpoint control and genomic instability, which are all associated with cancer. The phosphorylated form of NIPA may also be involved in apoptotic signaling pathways.

CHROMOSOMAL LOCATION

Genetic locus: ZC3HC1 (human) mapping to 7q32.2; Zc3hc1 (mouse) mapping to 6 A3.3.

SOURCE

NIPA (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of NIPA 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.

STORAGE

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

APPLICATIONS

NIPA (H-300) is recommended for detection of NIPA 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NIPA (H-300) is also recommended for detection of NIPA in additional species, including equine, canine and bovine.

Suitable for use as control antibody for NIPA siRNA (h): sc-61197, NIPA siRNA (m): sc-61198, NIPA shRNA Plasmid (h): sc-61197-SH, NIPA shRNA Plasmid (m): sc-61198-SH, NIPA shRNA (h) Lentiviral Particles: sc-61197-V and NIPA shRNA (m) Lentiviral Particles: sc-61198-V.

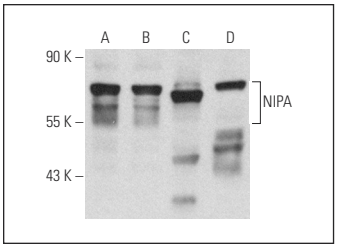
Molecular Weight of NIPA: 60 kDa.

Positive Controls: mouse liver extract: sc-2256, mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NIPA (H-300): sc-134601. Western blot analysis of NIPA expression in HeLa (**A**) and WI 38 (**B**) whole cell lysates and mouse brain (**C**) and mouse liver (**D**) tissue extracts.

RESEARCH USE

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

PROTOCOLS

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