SANTA CRUZ BIOTECHNOLOGY, INC.

NIPA (C-14): sc-48603

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 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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.

Blocking peptide available for competition studies, sc-48603 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NIPA (C-14) 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 (C-14) 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.

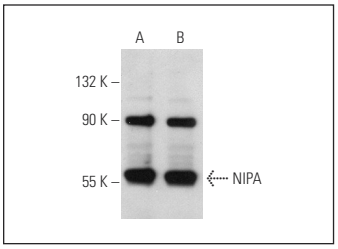
Molecular Weight of NIPA: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, WI-38 whole cell lysate: sc-364260 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NIPA (C-14): sc-48603. Western blot analysis of NIPA expression in HeLa (**A**) and WI 38 (**B**) 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.

PROTOCOLS

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