SANTA CRUZ BIOTECHNOLOGY, INC.

NPAT (C-19): sc-32359

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The nuclear protein, ataxia telangiectasia locus (NPAT), an essential downstream component of the cyclin E/Cdk2 signaling pathway, acts as a critical regulator for S phase entry, histone gene expression and Cajal body maintenance in somatic cells. This protein was originally identified by its chromosomal location, 11q23, and its proximity to the ATM gene, which is responsible for the autosomal recessive disease ataxia telangiectasia (AT). The NPAT protein sequence is strongly conserved in eukaryotes and its expression is ubiquitous. The C-terminal half of the NPAT protein contains multiple elements required for induction of S phase, while the N-terminal half appears to be crucial for the activation of Histone H4 and H2B. NPAT contains several Cdk2 phosphorylation sites, but they do not appear to affect protein function.

CHROMOSOMAL LOCATION

Genetic locus: NPAT (human) mapping to 11q22.3; Npat (mouse) mapping to 9 A5.3.

SOURCE

NPAT (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NPAT 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-32359 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

NPAT (C-19) is recommended for detection of NPAT 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), 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).

NPAT (C-19) is also recommended for detection of NPAT in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NPAT siRNA (h): sc-44351, NPAT siRNA (m): sc-44782, NPAT shRNA Plasmid (h): sc-44351-SH, NPAT shRNA Plasmid (m): sc-44782-SH, NPAT shRNA (h) Lentiviral Particles: sc-44351-V and NPAT shRNA (m) Lentiviral Particles: sc-44782-V.

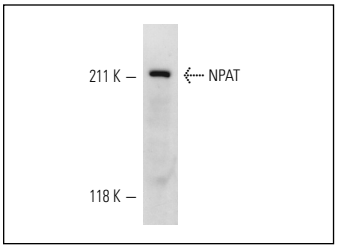
Molecular Weight of NPAT: 212 kDa.

Positive Controls: mouse testis extract: sc-2405.

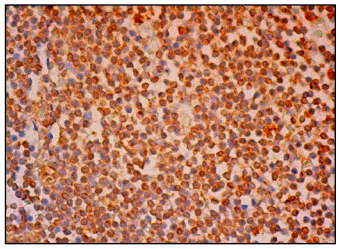
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



NPAT (C-19): sc-32359. Western blot analysis of NPAT expression in mouse testis tissue extract.



NPAT (C-19): sc-32359. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear and cytoplasmic staining of cells in germinal centers and cells in non-germinal centers.

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.