**BACKGROUND**

PNAd, Protein N-terminal asparagine amidohydrolase, is a 310 amino acid protein encoded by the human gene NTAN1. PNAd is responsible for the side-chain deamination of N-terminal Asparagine residues to aspartate. It is required for the Ubiquitin-dependent turnover of intracellular proteins that initiate with Met-Asn. These proteins are acetylated on the retained initiator methionine and can subsequently be modified by the removal of N-acetyl methionine by acylaminoacid hydrolase (AAH). Conversion of the resulting N-terminal Asparagine to aspartate by PNAd renders the proteins susceptible to arginylation, polyubiquitination and degradation as specified by the N-end rule. This enzyme does not act on substrates with internal or C-terminal asparagines and does not act on glutamine residues in any position.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: NTAN1 (human) mapping to 16p13.11; Ntan1 (mouse) mapping to 16 A1.

**SOURCE**

PNAd (E-11) is a mouse monoclonal antibody raised against amino acids 171-310 mapping at the C-terminus of PNAd of human origin.

**PRODUCT**

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

Blocking peptide available for competition studies, sc-166493 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**RESEARCH USE**

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

**APPLICATIONS**

PNAd (E-11) is recommended for detection of PNAd 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 1:50-1:1500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PNAd siRNA (h): sc-62832, PNAd siRNA (m): sc-62833, PNAd shRNA Plasmid (h): sc-62832-SH, PNAd shRNA Plasmid (m): sc-62833-SH, PNAd shRNA (h) Lentiviral Particles: sc-62832-V and PNAd shRNA (m) Lentiviral Particles: sc-62833-V.

Molecular Weight of PNAd: 35 kDa.

Positive Controls: Hep G2 whole cell lysate: sc-2227, SH-SY5Y cell lysate: sc-3812 or WI-38 whole cell lysate: sc-364260.

**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, 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

**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 for detailed protocols and support products.