SANTA CRUZ BIOTECHNOLOGY, INC.

Pin1 (H-123): sc-15340

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NIMA was originally shown in *Aspergillus nidulans* to be necessary for entry into mitosis. NIMA-related mammalian proteins have since been identified as Nek1, Nek2 and Nek3. High expression of Nek1 is seen in male and female germ cell lines of mouse. Nek2 is the closest known mammalian relative to NIMA. Like NIMA, Nek2 expression peaks at the G_2 to M phase transition. Pin1 was originally identified as a NIMA-interacting protein. Pin1 is a peptidyl-prolyl *cis/trans* isomerase (PPIase), which specifically binds to phosphoserine-proline or phosphothreonine-proline bonds in mitotic phosphoproteins. While previously identified PPIases have been shown to be involved in protein folding, assembly and transport, Pin1 is the first PPIase to be identified as a required protein for cell viability.

CHROMOSOMAL LOCATION

Genetic locus: PIN1 (human) mapping to 19p13.2; Pin1 (mouse) mapping to 9 A3.

SOURCE

Pin1 (H-123) is a rabbit polyclonal antibody raised against amino acids 41-163 mapping at the C-terminus of Pin1 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.

APPLICATIONS

Pin1 (H-123) is recommended for detection of Pin1 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).

Pin1 (H-123) is also recommended for detection of Pin1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Pin1 siRNA (h): sc-36230, Pin1 siRNA (m): sc-36231, Pin1 shRNA Plasmid (h): sc-36230-SH, Pin1 shRNA Plasmid (m): sc-36231-SH, Pin1 shRNA (h) Lentiviral Particles: sc-36230-V and Pin1 shRNA (m) Lentiviral Particles: sc-36231-V.

Molecular Weight of Pin1: 20 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Pin1 (m): 293T Lysate: sc-122584 or K-562 nuclear extract: sc-2130.

RESEARCH USE

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

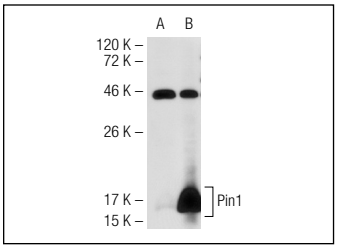
PROTOCOLS

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

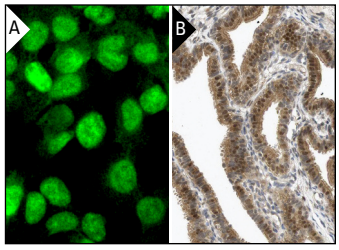
STORAGE

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

DATA



Pin1 (H-123): sc-15340. Western blot analysis of Pin1 expression in non-transfected: sc-117752 (**A**) and mouse Pin1 transfected: sc-122584 (**B**) 293T whole cell lysates.



Pin1 (H-123): sc-15340. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear and cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Galas, M.C., et al. 2006. The peptidylprolyl *cis/trans*-isomerase Pin1 modulates stress-induced dephosphorylation of Tau in neurons. Implication in a pathological mechanism related to Alzheimer disease. J. Biol. Chem. 281: 19296-19304.
2. Hamdane, M., et al. 2006. Pin1 allows for differential Tau dephosphorylation in neuronal cells. Mol. Cell. Neurosci. 32: 155-160.
3. Pulikkan, J.A., et al. 2010. Elevated PIN1 expression by C/EBPα-p30 blocks C/EBPα-induced granulocytic differentiation through c-Jun in AML. Leukemia 24: 914-923.
4. Wheaton, K., et al. 2010. BTG2 antagonizes Pin1 in response to mitogens and telomere disruption during replicative senescence. Aging Cell 9: 747-760.
5. Luo, Z., et al. 2010. Pin1 facilitates the phosphorylation-dependent ubiquitination of SF-1 to regulate gonadotropin β-subunit gene transcription. Mol. Cell. Biol. 30: 745-763.
6 Deleersnijder, A., et al. 2011. Comparative analysis of different peptidyl-prolyl isomerases reveals FK506-binding protein 12 as the most potent enhancer of α-synuclein aggregation. J. Biol. Chem. 286: 26687-26701.
7. Narita, Y., et al. 2013. Pin1 interacts with the Epstein-Barr virus DNA polymerase catalytic subunit and regulates viral DNA replication. J. Virol. 87: 2120-2127.