SANTA CRUZ BIOTECHNOLOGY, INC.

PINK1 (H-300): sc-33796

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A member of the serine/threonine protein kinase family, PTEN-induced putative kinase 1 (PINK1), is a tumor suppressor. PINK1 is primarily located in mitochondria and is ubiquitously expressed in testis, skeletal muscle and heart tissue. It can also be detected at lower levels in pancreas, ovary, brain, placenta, kidney, liver, prostate and small intestine. During cellular stress PINK1 protects against mitochondrial dysfunction by inducing phosphorylation mitochondrial proteins. PINK1 mutations may give rise to different autophosphorylation activity. Mutations in the PINK1 gene (PARK6) are associated with early onset Parkinson's disease, a recessive neurodegenerative disorder characterized by resting tremor, muscular rigidity, bradykinesia and postural instability. Parkinson's disease generally involves the presence of intraneuronal accumulations of aggregated proteins (Lewy bodies) in brain neurons.

REFERENCES

1. Unoki, M., et al. 2001. Growth-suppressive effects of BPOZ and EGR2, two genes involved in the PTEN signaling pathway. Oncogene 20: 4457-4465.
2. Healy, D.G., et al. 2004. The gene responsible for PARK6 Parkinson's disease, PINK1, does not influence common forms of parkinsonism. Ann. Neurol. 56: 329-335.
3. Hatano, Y., et al. 2004. Novel PINK1 mutations in early-onset parkinsonism. Ann. Neurol. 56: 424-427.
4. Rogaeva, E., et al. 2004. Analysis of the PINK1 gene in a large cohort of cases with Parkinson disease. Arch. Neurol. 61: 1898-1904.
5. Valente, E.M., et al. 2004. Hereditary early-onset Parkinson's disease caused by mutations in PINK1. Science 304: 1158-1160.
6. Silvestri, L., et al. 2005. Mitochondrial import and enzymatic activity of PINK1 mutants associated to recessive parkinsonism. Hum. Mol. Genet. 14: 3477-3492.

CHROMOSOMAL LOCATION

Genetic locus: PINK1 (human) mapping to 1p36.12; Pink1 (mouse) mapping to 4 D3.

SOURCE

PINK1 (H-300) is a rabbit polyclonal antibody raised against amino acids 282-581 mapping at the C-terminus of PINK1 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.

RESEARCH USE

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

APPLICATIONS

PINK1 (H-300) is recommended for detection of PINK1 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).

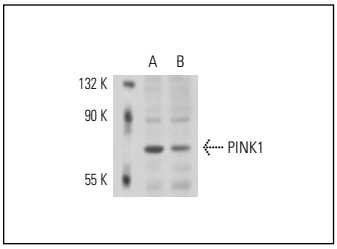
PINK1 (H-300) is also recommended for detection of PINK1 in additional species, including bovine and porcine.

Suitable for use as control antibody for PINK1 siRNA (h): sc-44598, PINK1 siRNA (m): sc-44599, PINK1 shRNA Plasmid (h): sc-44598-SH, PINK1 shRNA Plasmid (m): sc-44599-SH, PINK1 shRNA (h) Lentiviral Particles: sc-44598-V and PINK1 shRNA (m) Lentiviral Particles: sc-44599-V.

Molecular Weight of PINK1: 66 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

DATA



PINK1 (H-300): sc-33796. Western blot analysis of PINK1 expression in rat brain (**A**) and mouse brain (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Chelh, I., et al. 2009. Molecular profiles of quadriceps muscle in myostatin-null mice reveal PI3K and apoptotic pathways as myostatin targets. BMC Genomics 10: 196.
2. Ortiz-Ortiz, M.A., et al. 2010. Curcumin exposure induces expression of the Parkinson's disease-associated leucine-rich repeat kinase 2 (LRRK2) in rat mesencephalic cells. Neurosci. Lett. 468: 120-124.
3. Sengupta, A., et al. 2011. FoxO transcription factors promote cardiomyocyte survival upon induction of oxidative stress. J. Biol. Chem. 286: 7468-7478.
4. Chelh, I., et al. 2011. Myostatin inactivation induces a similar muscle molecular signature in double-muscled cattle as in mice. Animal 5: 278-286.
5. d'Amora, M., et al. 2011. Expression of PINK1 in the brain, eye and ear of mouse during embryonic development. J. Chem. Neuroanat. 41: 73-85.
6. Schmidt, S., et al. 2011. Genetic mouse models for Parkinson's disease display severe pathology in glial cell mitochondria. Hum. Mol. Genet. 20: 1197-1211.
7. Baldelli, S., et al. 2014. PGC-1α buffers ROS-mediated removal of mitochondria during myogenesis. Cell Death Dis. 5: e1515.