SANTA CRUZ BIOTECHNOLOGY, INC.

PINK1 (C-3): sc-518052

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.

CHROMOSOMAL LOCATION

Genetic locus: PINK1 (human) mapping to 1p36.12.

SOURCE

PINK1 (C-3) is a mouse monoclonal antibody raised against amino acids 282-581 mapping at the C-terminus of PINK1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PINK1 (C-3) is available conjugated to agarose (sc-518052 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518052 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518052 PE), fluorescein (sc-518052 FITC), Alexa Fluor® 488 (sc-518052 AF488), Alexa Fluor® 546 (sc-518052 AF546), Alexa Fluor® 594 (sc-518052 AF594) or Alexa Fluor® 647 (sc-518052 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518052 AF680) or Alexa Fluor® 790 (sc-518052 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PINK1 (C-3) is recommended for detection of PINK1 of 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 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of PINK1: 66 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

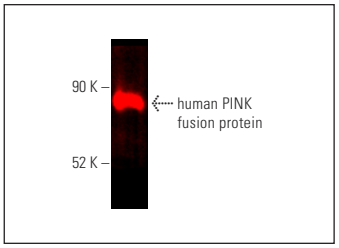
STORAGE

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

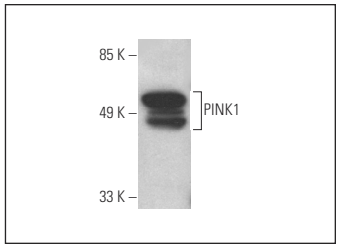
RESEARCH USE

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

DATA



PINK1 (C-3): sc-518052. Western blot analysis of human recombinant PINK1 fusion protein. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 790: sc-533666.



PINK1 (C-3) HRP: sc-518052 HRP. Direct western blot analysis of PINK1 expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhang, J., et al. 2019. Cardiomyocyte-specific loss of RMP causes myocardial dysfunction and heart failure. Cardiovasc. Res. 115: 1617-1628.
2. Zheng, J., et al. 2021. LC3B/p62-mediated mitophagy protects A549 cells from resveratrol-induced apoptosis. Life Sci. 271: 119139.
3. Saha, B., et al. 2022. Interactomic analysis reveals a homeostatic role for the HIV restriction factor TRIM5α in mitophagy. Cell Rep. 39: 110797.
4. Tsuchiya, H., et al. 2022. NEAT1 confers radioresistance to hepatocellular carcinoma cells by inducing PINK1/Parkin-mediated mitophagy. Int. J. Mol. Sci. 23: 14397.
5. Park, M., et al. 2022. The role of extracellular vesicles in optic nerve injury: neuroprotection and mitochondrial homeostasis. Cells 11: 3720.
6. Huang, C.F., et al. 2023. Mitophagy effects of protodioscin on human osteosarcoma cells by inhibition of p38MAPK targeting NIX/LC3 axis. Cells 12: 395.
7. Qin, C., et al. 2023. STOML2 restricts mitophagy and increases chemosensitivity in pancreatic cancer through stabilizing PARL-induced PINK1 degradation. Cell Death Dis. 14: 191.
8. Wang, S., et al. 2023. The therapeutic potential of berberine chloride against SARM1-dependent axon degeneration in acrylamide-induced neuropathy. Phytother. Res. 37: 77-88.
9. Tan, Q., et al. 2023. DMT1 differentially regulates mitochondrial complex activities to reduce glutathione loss and mitigate ferroptosis. Free Radic. Biol. Med. 207: 32-44.

PROTOCOLS

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