SANTA CRUZ BIOTECHNOLOGY, INC.

PINK1 (38CT20.8.5): sc-517353

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. Rogaeva, E., et al. 2004. Analysis of the PINK1 gene in a large cohort of cases with Parkinson disease. Arch. Neurol. 61: 1898-1904.
3. 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.

CHROMOSOMAL LOCATION

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

SOURCE

PINK1 (38CT20.8.5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to PINK1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PINK1 (38CT20.8.5) 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

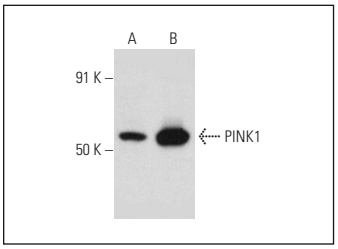
Molecular Weight of PINK1: 66 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or Sol8 cell lysate: sc-2249.

STORAGE

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

DATA



PINK1 (38CT20.8.5): sc-517353. Western blot analysis of PINK1 expression in A-431 (**A**) and Sol8 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bhatia, D., et al. 2019. Mitophagy dependent macrophage reprogramming protects against kidney fibrosis. JCI Insight 4: e132826.
2. Zhao, Y., et al. 2020. Dexmedetomidine protects against lipopolysaccharide-induced acute kidney injury by enhancing autophagy through inhibition of the PI3K/Akt/mTOR pathway. Front. Pharmacol. 11: 128.
3. Dumas, K., et al. 2020. REDD1 deficiency protects against nonalcoholic hepatic steatosis induced by high-fat diet. FASEB J. 34: 5046-5060.
4. Pecorelli, A., et al. 2020. Alterations of mitochondrial bioenergetics, dynamics, and morphology support the theory of oxidative damage involvement in autism spectrum disorder. FASEB J. 34: 6521-6538.
5. Xiang, Q., et al. 2020. Gerontoxanthone I and macluraxanthone induce mitophagy and attenuate ischemia/reperfusion injury. Front. Pharmacol. 11: 452.
6. Li, X., et al. 2020. Cyanidin-3-O-glucoside improves non-alcoholic fatty liver disease by promoting PINK1-mediated mitophagy in mice. Br. J. Pharmacol. 177: 3591-3607.
7. Lin, J., et al. 2020. Paradoxical mitophagy regulation by PINK1 and TUFm. Mol. Cell 80: 607-620.e12.
8. Correia, S.C., et al. 2021. Intermittent hypoxic conditioning rescues cognition and mitochondrial bioenergetic profile in the triple transgenic mouse model of Alzheimer's disease. Int. J. Mol. Sci. 22: 461.
9. Correia, S.C., et al. 2021. Intermittent hypoxic conditioning rescues cognition and mitochondrial bioenergetic profile in the triple transgenic mouse model of Alzheimer's disease. Int. J. Mol. Sci. 22: 461.
10. Islam, M.N., et al. 2021. The mitochondrial calcium uniporter of pulmonary type 2 cells determines severity of ARDS. bioRxiv. E-published.

RESEARCH USE

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