

**Mouse Anti-PINK1 (PTEN Induced Kinase 1) [N4/15]: MC0059**

**Intended Use:** For Research Use Only

**Description:** PINK1 (PTEN-induced putative kinase 1), a member of the serine/threonine protein kinase family, is a tumor suppressor. It 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. PINK1 protects from mitochondrial dysfunction in cells by conferring different autophosphorylation activity to mitochondrial genes. Mitochondrial proteins are critical for the regulation of cellular energy and adaptation to stress. Particularly in brain cells, mitochondrial demand is extraordinarily high, in order to accommodate aerobic and anaerobic support of high energy processes. 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. Growing evidence supports the contribution of mitophagy impairment to several human pathologies, including PD and Alzheimer's diseases (AD). Therefore, therapeutic interventions aiming to modulate PINK1/PARKIN signaling might have the potential to treat these diseases.

**Specifications**

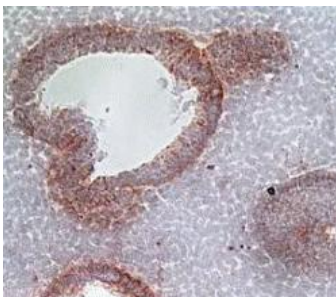
Clone: N4/15  
 Source: Mouse  
 Isotype: IgG1  
 Reactivity: Human, mouse, rat  
 Immunogen: Fusion protein aa 100-500 of human PINK1  
 Localization: Cytoplasm, mitochondrion, mitochondrion outer membrane  
 Formulation: Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)  
 Storage: Store at 2°- 8°C  
 Applications: IHC  
 Package:

Description	Catalog No.	Size
PINK1 (PTEN Induced Kinase 1) [N4/15] Concentrated	MC0059	1 ml

**IHC Procedure\***

Positive Control Tissue: Testis, skeletal muscle, heart, brain  
 Concentrated Dilution: 25-100  
 Pretreatment: Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



FFPE human endometrium tissue stained with anti-PINK1 using DAB

**References:**

1. GRN, NOTCH3, FN1, and PINK1 expression in eutopic endometrium - potential biomarkers in the detection of endometriosis - a pilot study. Isabell Holzer 1, et al. J Assist Reprod Genet. Nov;37(11):2723-2732, 2020.
2. Interleukin-1β drives NEDD8 nuclear-to-cytoplasmic translocation, fostering parkin activation via NEDD8 binding to the P-ubiquitin activating site. Paul A., et al. Journal of Neuroinflammation. Dec 27, 2019.