www.antibodiesinc.com
orders@antibodiesinc.com
530-758-4400

PRODUCT DATASHEET

Anti-LRRK2 Antibody

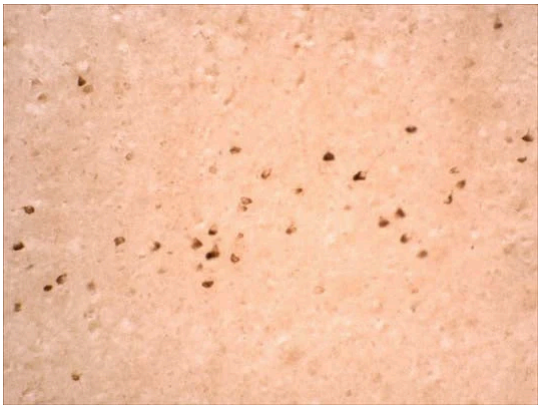
Product Details

Available Variants	50 µg (SKU:R-183-50)
Conjugate	Unconjugated
Isotype	IgG
Host Species	Rabbit
Format	Affinity purified
Physical State	Lyophilized
Applications	IHC
Dilution Ranges	IHC: 1:500-1:1000
Species Reactivity	Human
Immunogen	A synthetic peptide (CLKRKRKILSSDDSLRSS) corresponding to amino acids 946 - 962 of the human LRRK2 protein conjugated to diptheria toxin was used as the immunogen.
Specificity	Specificity was demonstrated by immunohistochemistry. The antibody stains positive tangles in inferior temporal cortex of human brain affected by Alzheimer's disease. This antiserum has been successfully tested in human. Other species have not yet been tested.
Storage	Spin vial briefly before opening. Reconstitute with 50 µL sterile-filtered, ultrapure water and centrifuge to remove any insoluble material. After reconstitution keep aliquots at -20°C for a higher stability, and at 2-8°C with an appropriate antibacterial agent. Glycerol (1:1) may be added for an additional stability. Avoid repetitive freeze/thaw cycles.
UniProt ID	Q5S007 UniProt Summary: Serine/threonine-protein kinase which phosphorylates a broad range of proteins involved in multiple processes such as neuronal plasticity, innate immunity, autophagy, and vesicle trafficking. Is a key regulator of RAB GTPases by regulating the GTP/GDP exchange and interaction partners of RABs through phosphorylation. Phosphorylates RAB3A, RAB3B,

RAB3C, RAB3D, RAB5A, RAB5B, RAB5C, RAB8A, RAB8B, RAB10, RAB12, RAB29, RAB35, and RAB43. Regulates the RAB3IP-catalyzed GDP/GTP exchange for RAB8A through the phosphorylation of 'Thr-72' on RAB8A. Inhibits the interaction between RAB8A and GDI1 and/or GDI2 by phosphorylating 'Thr-72' on RAB8A. Regulates primary ciliogenesis through phosphorylation of RAB8A and RAB10, which promotes SHH signaling in the brain. Together with RAB29, plays a role in the retrograde trafficking pathway for recycling proteins, such as mannose-6-phosphate receptor (M6PR), between lysosomes and the Golgi apparatus in a retromer-dependent manner. Regulates neuronal process morphology in the intact central nervous system (CNS). Plays a role in synaptic vesicle trafficking. Plays an important role in recruiting SEC16A to endoplasmic reticulum exit sites (ERES) and in regulating ER to Golgi vesicle-mediated transport and ERES organization. Positively regulates autophagy through a calcium-dependent activation of the CaMKK/AMPK signaling pathway. The process involves activation of nicotinic acid adenine dinucleotide phosphate (NAADP) receptors, increase in lysosomal pH, and calcium release from lysosomes. Phosphorylates PRDX3. By phosphorylating APP on 'Thr-743', which promotes the production and the nuclear translocation of the APP intracellular domain (AICD), regulates dopaminergic neuron apoptosis. Acts as a positive regulator of innate immunity by mediating phosphorylation of RIPK2 downstream of NOD1 and NOD2, thereby enhancing RIPK2 activation. Independent of its kinase activity, inhibits the proteasomal degradation of MAPT, thus promoting MAPT oligomerization and secretion. In addition, has GTPase activity via its Roc domain which regulates LRRK2 kinase activity. Recruited by RAB29/RAB7L1 to overloaded lysosomes where it phosphorylates and stabilizes RAB8A and RAB10 which promote lysosomal content release and suppress lysosomal enlargement through the EHBP1 and EHBP1L1 effector proteins.

Country of Origin	United States
Shipping	25°C (ambient)
Expiration	12 months after date of receipt (unopened vial).
Usage Statement	For research use only.
NCBI Gene ID	120892

Product Images



This antibody stains LRRK2 positive tangles in inferior temporal cortex of human brain affected by Alzheimer's disease, when used at a dilution of 1:500.