

LRRK2 polyclonal antibody

Catalog: BS67741

Host: Ra

Rabbit

Reactivity: Human, Mouse, Rat

BackGround:

Parkinson's disease (PD), the second most common neurodegenerative disease after Alzheimer's, is a progressive movement disorder characterized by rigidity, tremors, and postural instability. The pathological hallmarks of PD are progressive loss of dopaminergic neurons in the substantia nigra of the ventral midbrain and the presence of intracellular Lewy bodies (protein aggregates of a-synuclein, ubiquitin, and other components) in surviving neurons of the brain stem. Research studies have shown various genes and loci are genetically linked to PD including α -synuclein/PARK1 and 4, parkin/PARK2, UCH-L1/PARK5, PINK1/PARK6, DJ-1/PARK7, LRRK2/PARK8, synphilin-1, and NR4A2.

Leucine-rich repeat kinase 2 (LRRK2) contains amino-terminal leucine-rich repeats (LRR), a Ras-like small GTP binding protein-like (ROC) domain, an MLK protein kinase domain, and a carboxy-terminal WD40 repeat domain. Research studies have linked at least 20 LRRK2 mutations to PD, with the G2019S mutation being the most prevalent. The G2019S mutation causes increased LRRK2 kinase activity, which induces a progressive reduction in neurite length that leads to progressive neurite loss and decreased neuronal survival. Researchers are currently testing the MLK inhibitor CEP-1347 in PD clinical trials, indicating the potential value of LRRK2 as a therapeutic target for treatment of PD.

Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. **Molecular Weight:**

~ 270 kDa

270 KDu

Swiss-Prot:

Q5S007

Purification&Purity:

The antibody was purified by immunogen affinity chro-

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matography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF (1/50 - 1/200)

Storage&Stability:

Store at $4 \,^{\circ}{\rm C}$ short term. Aliquot and store at $-20 \,^{\circ}{\rm C}$ long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of LRRK2 protein. **DATA:**



Western blot analysis of LRRK2 expression in HepG2 (A), mouse lung (B) whole cell lysates.



Immunohistochemical analysis of LRRK2 staining in mouse kidney formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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PRODUCT DATA SHEET

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Immunofluorescent analysis of LRRK2 staining in C2C12 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a Alexa Fluor 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

Note:

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

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