SANTA CRUZ BIOTECHNOLOGY, INC.

LRRK2 (C-13): sc-48733

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BIOTECHNOLOGY

The Power to Question

BACKGROUND

Parkinson's disease is a disorder of movement, cognition and emotion. It is characterized pathologically by neuronal degeneration with Lewy bodies, which are cytoplasmic inclusion bodies containing deposits of aggregated proteins. Mutations in the leucine-rich repeat kinase 2 gene (LRRK2) cause autosomal-dominant parkinsonism, with clinical features of Parkinson's disease and with pleomorphic pathology including deposits of aggregated protein. The LRRK2 protein consists of multiple domains and belongs to the Roco family, a novel group of the Ras/GTPase superfamily. Besides the GTPase (Roc) domain, it contains a predicted kinase domain, with homology to MAP kinase kinase kinases. LRRK2 is localized in the cytoplasm and is associated with cellular membrane structures. The purified LRRK2 protein demonstrates autokinase activity.

REFERENCES

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2. Mata, I.F., et al. 2005. LRRK2 pathogenic substitutions in Parkinson's disease. Neurogenetics 6: 171-177.

3. Foroud, T., et al. 2005. LRRK2: both a cause and a risk factor for Parkinson disease? Neurology 65: 664-665.

4. Paisan-Ruiz, C., et al. 2005. LRRK2 gene in Parkinson disease: mutation analysis and case control association study. Neurology 65: 696-700.

5. Farrer, M., et al. 2005. LRRK2 mutations in Parkinson disease. Neurology 65: 738-740.

6. Zabetian, C.P., et al. 2005. A clinic-based study of the LRRK2 gene in Parkinson disease yields new mutations. Neurology 65: 741-744.

7. Kachergus, J., et al. 2005. Identification of a novel LRRK2 mutation linked to autosomal dominant parkinsonism: evidence of a common founder across European populations. Am. J. Hum. Genet. 76: 672-680.

8. Toft, M., et al. 2005. LRRK2 mutations are not common in Alzheimer's disease. Mech. Ageing Dev. 126: 1201-1205.

9. Nichols, W.C., et al. 2005. Genetic screening for a single common LRRK2 mutation in familial Parkinson's disease. Lancet 365: 410-412.

CHROMOSOMAL LOCATION

Genetic locus: LRRK2 (human) mapping to 12q12; Lrrk2 (mouse) mapping to 15 F1.

SOURCE

LRRK2 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of LRRK2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48733 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LRRK2 (C-13) is recommended for detection of LRRK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 LRRK2 siRNA (h): sc-45380, LRRK2 siRNA (m): sc-45750, LRRK2 shRNA Plasmid (h): sc-45380-SH, LRRK2 shRNA Plasmid (m): sc-45750-SH, LRRK2 shRNA (h) Lentiviral Particles: sc-45380-V and LRRK2 shRNA (m) Lentiviral Particles: sc-45750-V.

Molecular Weight of LRRK2: 280 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA
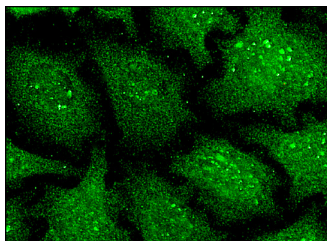
LRRK2 (C-13): sc-48733. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

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.

MONOS
Satisfation Guaranteed

Try **LRRK2 (133AT1218): sc-130159**, our highly recommended monoclonal alternative to LRRK2 (C-13).