


Product datasheet

Anti-LRRK2 antibody [MJFF2 (c41-2)] - BSA and Azide free ab172378

KO VALIDATED Recombinant RabMAB

[1 References](#) [3 Images](#)

Overview

Product name	Anti-LRRK2 antibody [MJFF2 (c41-2)] - BSA and Azide free
Description	Rabbit monoclonal [MJFF2 (c41-2)] to LRRK2 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: WB, IP Unsuitable for: ICC/IF
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat 
Immunogen	Recombinant fragment within Human LRRK2 aa 950 to the C-terminus. The exact sequence is proprietary.
Positive control	WB: A549 and MEF cell lysates; HEK293 cells transfected with LRRK2 cell lysate. IP: Mouse cerebral cortex, A549 .
General notes	<p>ab172378 is the carrier-free version of ab133474.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production

For more information [see here](#).

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb[®] patents](#).

This antibody was developed with support from The Michael J. Fox Foundation.



Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	MJFF2 (c41-2)
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab172378 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 286 kDa.
IP		Use at an assay dependent concentration.

Application notes Is unsuitable for ICC/IF.

Target

Function 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. 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. Phosphorylates PRDX3. Has GTPase activity. May play a role in the phosphorylation of proteins central to Parkinson disease.

Tissue specificity Expressed in the brain. Expressed in pyramidal neurons in all cortical laminae of the visual cortex, in neurons of the substantia nigra pars compacta and caudate putamen (at protein level).

Expressed throughout the adult brain, but at a lower level than in heart and liver. Also expressed in placenta, lung, skeletal muscle, kidney and pancreas. In the brain, expressed in the cerebellum, cerebral cortex, medulla, spinal cord occipital pole, frontal lobe, temporal lobe and putamen. Expression is particularly high in brain dopaminergic areas.

Involvement in disease

Parkinson disease 8

Sequence similarities

Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family.
Contains 12 LRR (leucine-rich) repeats.
Contains 1 protein kinase domain.
Contains 1 Roc domain.
Contains 7 WD repeats.

Domain

The seven-bladed WD repeat region is critical for synaptic vesicle trafficking and mediates interaction with multiple vesicle-associated presynaptic proteins.
The Roc domain mediates homodimerization and regulates kinase activity.

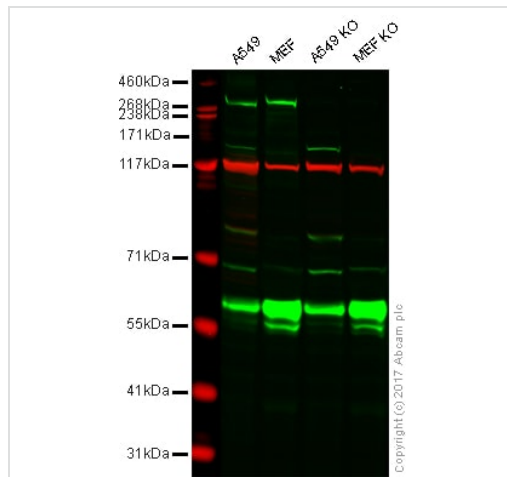
Post-translational modifications

Autophosphorylated.

Cellular localization

Membrane. Cytoplasm. Perikaryon. Mitochondrion. Golgi apparatus. Cell projection, axon. Cell projection, dendrite. Endoplasmic reticulum. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane. Endosome. Lysosome. Mitochondrion outer membrane. Mitochondrion inner membrane. Mitochondrion matrix. Predominantly associated with intracytoplasmic vesicular and membranous structures (By similarity). Localized in the cytoplasm and associated with cellular membrane structures. Predominantly associated with the mitochondrial outer membrane of the mitochondria. Colocalized with RAB29 along tubular structures emerging from Golgi apparatus. Localizes in intracytoplasmic punctate structures of neuronal perikarya and dendritic and axonal processes.

Images



Western blot - Anti-LRRK2 antibody [MJFF2 (c41-2)]
- BSA and Azide free (ab172378)

This WB data was generated using the same anti-LRRK2 antibody clone, MJFF2 (c41-2), in a different buffer formulation (cat# [ab133474](#)).

Lane 1: Wild type A549 whole cell lysate (20 µg)

Lane 2: Wild type MEF whole cell lysate (20 µg)

Lane 3: LRRK2 knockout A549 whole cell lysate (20 µg)

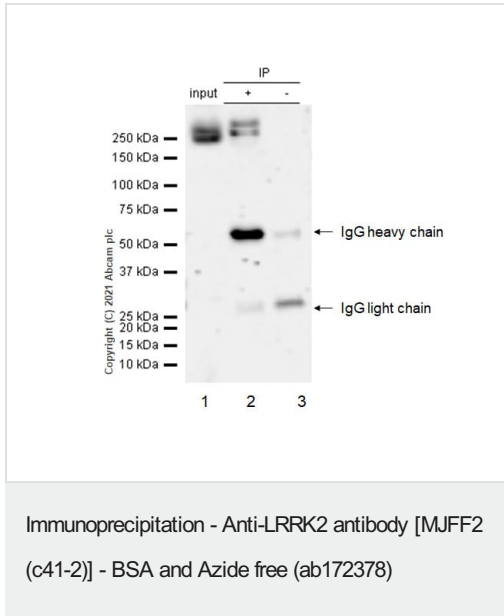
Lane 4: LRRK2 knockout MEF whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - [ab133474](#) observed at 286 kDa. Red - loading control, [ab18058](#), observed at 130 kDa.

[ab133474](#) was shown to recognize LRRK2 in wild type A549 and MEF cells along with additional cross reactive bands. Whilst signal was not seen in LRRK2 knockout cells. Wild-type and LRRK2 knockout samples were subjected to SDS-PAGE. Ab133474 and [ab18058](#) (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 10000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse

IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

Wild-type and LRRK2 knockout MEF and A549 cells were provided as a generous gift from Professor Dario Alessi, MRC Protein Phosphorylation and Ubiquitination Unit (University of Dundee).



This data was developed using **ab133474**, the same antibody clone in a different buffer formulation.

LRRK2 was immunoprecipitated from 0.35 mg A549 (Human lung carcinoma epithelial cell) whole cell lysate 10 µg with **ab133474** at 1/60 dilution (2µg). VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/5000 dilution.

Lane 1: A549 (Human lung carcinoma epithelial cell) whole cell lysate 10 µg





Lane 2: ab133474 IP in A549 whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab133474** in A549 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFD/MTBST.

Fresh lysate should be used to minimize protein degradation.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-LRRK2 antibody [MJFF2 (c41-2)] - BSA and Azide free (ab172378)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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