abcam

Product datasheet

Anti-LRRK2 antibody [MJFF4 (c81-8)] ab133476

敲除验证 重组 RabMAb

9 References 3 图像

概述

产品名称	Anti-LRRK2抗体[MJFF4 (c81-8)]
描述	兔单克隆抗体[MJFF4 (c81-8)] to LRRK2
宿主	Rabbit
经测试应用	**适用于:** WB, ICC/IF, IP, IHC-P
种属反应性	**与反应:** Mouse, Human **预测可用于:** Rat
免疫原	Recombinant fragment within Human LRRK2 aa 950 to the C-terminus. The exact sequence is proprietary.
阳性对照	WB: Wild-type HAP1 cell lysate. MEF and A549 cell lysate.
常规说明	Well-characterized antibodies to efficiently detect and purify LRRK2 protein are a critical need in the Parkinson's Disease (PD) research community. To help accelerate LRRK2 research, The Michael J. Fox Foundation (MJFF), working with Abcam, has generated unique and high quality LRRK2 rabbit monoclonal antibodies to be widely available for PD research community. LRRK2 (Leucine-rich repeat kinase 2, dardarin) is a protein kinase belonging to the ROCO family, which is defined by the presence of a ROC (Ras/GTPase of complex proteins) domain and COR (C-terminal of Roc) region. LRRK2 exhibits kinase activity whereby it can undergo autophosphorylation and can phosphorylate generic substrates. In addition, the GTPase domain of LRRK2 can mediate GDP (guanosine-5′-diphosphate)/GTP (guanosine-5′-triphosphate) binding as well as GTP hydrolysis. LRRK2 is mutated in a significant number of Parkinson's disease (PD) patients. Mutations in this gene account for 4% of PD, and are observed in 1% of sporadic PD patients. Clinical symptoms of patients carrying PD-associated mutations of LRRK2 are indistinguishable from typical sporadic PD. The spectra of neuropathological features of PARK8 (type 8), the type corresponding to LRRK2, is broad and appears to encompass those associated with other familial PD cases such as PARK1 (alpha-synuclein) and PARK2 (Parkin). Patients with this gene mutation have typical relatively late onset Parkinsonism with features comparable with idiopathic PD; symptoms include asymmetric rest tremor, bradykinesia, rigidity, and a good response to 3,4-dihyroxy-l-phenylalanine (l-DOPA). The pathology of cases with LRRK2 mutations is pleomorphic. For more characterization data and protocols using this LRRK2 Antibody, please refer to Davies, et al. 2013. Biochemical J 453(1):101-113 [PMID: 23560750].

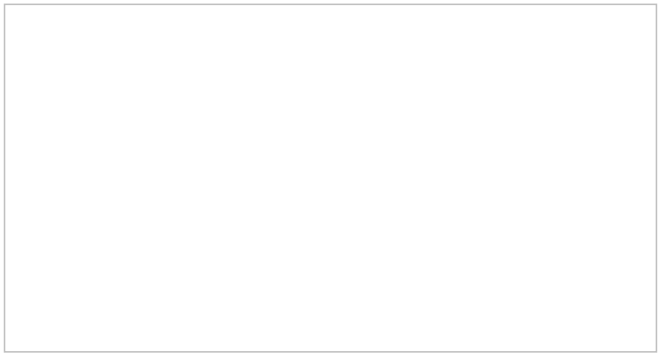
This product is a recombinant monoclonal antibody, which offers several advantages including:

- 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.



性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituent: 99% PBS
纯度	Protein A purified
克隆	单克隆
克隆编号	MJFF4 (c81-8)
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab133476于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

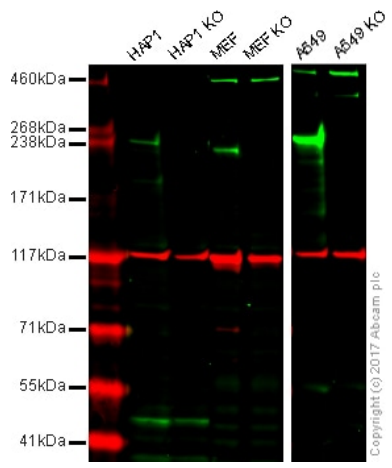
应用	Ab评论	说明
WB		1/1000 - 1/10000. Predicted molecular weight: 286 kDa.
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

应用	Ab评论	说明
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

靶标

功能	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.
组织特异性	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 dopaminoceptive areas.
疾病相关	Parkinson disease 8
序列相似性	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.
结构域	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.
翻译后修饰	Autophosphorylated.
细胞定位	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.

图片



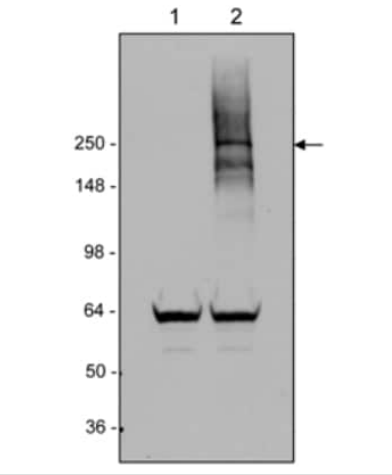
Western blot - Anti-LRRK2 antibody [MJFF4 (c81-8)] (ab133476)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: LRRK2 knockout HAP1 cell lysate (20 µg)
Lane 3: MEF cell lysate (20 µg)
Lane 4: LRRK2 knockout MEF cell lysate (20 µg)
Lane 5: A549 cell lysate (20ug)
Lane 6: LRRK2 knockout A549 cell lysate (20 µg)

Lanes 1 - 6: Merged signal (red and green). Green – ab133476 observed at 238 kDa. Red - loading control, **ab130007**, observed at 124 kDa.

ab133476 was shown to specifically react with LRRK2 in wild type A549, MEF and HAP1 cells along with additional cross-reactive bands. No band was observed when LRRK2 knockout samples were used. Wild-type and LRRK2 knockout samples were subjected to SDS-PAGE. ab133476 and **ab130007** (loading control to Vinculin) were diluted at 1/500 and 1/10000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed **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 provide as a generous gift from Professor Dario Alessi, MRC Protein Phosphorylation and Ubiquitination Unit (University of Dundee).



Western blot - Anti-LRRK2 antibody [MJFF4 (c81-8)] (ab133476)

This image is courtesy of Zhuohua Zhang Lab (Sanford-Burnham Medical Research Institute)

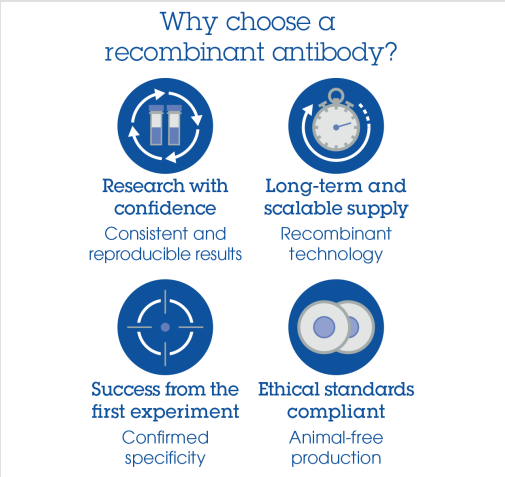
All lanes : Anti-LRRK2 antibody [MJFF4 (c81-8)] (ab133476) at 1/1000 dilution

Lane 1 : HEK293 cell lysate transfected with 3*Flag vector
Lane 2 : HEK293 cell lysate transfected with 3*Flag wild type Human LRRK2 full length

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 286 kDa



Anti-LRRK2 antibody [MJFF4 (c81-8)] (ab133476)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.cn/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors