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Product datasheet

Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] ab11251

敲除验证

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概述

产品名称	Anti-PARK7/DJ1抗体[malphaDJ-1/E2.19]
描述	小鼠单克隆抗体[malphaDJ-1/E2.19] to PARK7/DJ1
宿主	Mouse
经测试应用	**适用于:** Flow Cyt (Intra), WB, ICC
种属反应性	**与反应:** Human **预测可用于:** Zebrafish **不与反应:** Mouse
免疫原	Recombinant full length protein corresponding to Human PARK7/DJ1.
阳性对照	WB: HeLa whole cell lysate. Flow Cyt (Intra): HepG2 cells. ICC: HeLa cells.
常规说明	This monoclonal antibody to DJ-1 has been knockout validated in Western blot. The expected band for DJ-1 was observed in wild type cells and the band was not seen in knockout cells. This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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: 7.40 Preservative: 0.02% Sodium azide Constituents: 6.97% L-Arginine, PBS
纯度	Purified IgM

克隆	单克隆
克隆编号	malphaDJ-1/E2.19
同种型	IgM

应用

The Abpromise guarantee Abpromise™承诺保证使用ab11251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
Flow Cyt (Intra)		1/100. **ab91545** - Mouse monoclonal IgM, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (2)	Use at an assay dependent concentration. Detects a band of approximately 20 kDa.
ICC		1/500.

靶标

功能 Protects cells against oxidative stress and cell death. Plays a role in regulating expression or stability of the mitochondrial uncoupling proteins SLC25A14 and SLC25A27 in dopaminergic neurons of the substantia nigra pars compacta and attenuates the oxidative stress induced by calcium entry into the neurons via L-type channels during pacemaking. Eliminates hydrogen peroxide and protects cells against hydrogen peroxide-induced cell death. May act as an atypical peroxiredoxin-like peroxidase that scavenges hydrogen peroxide. Following removal of a C-terminal peptide, displays protease activity and enhanced cytoprotective action against oxidative stress-induced apoptosis. Stabilizes NFE2L2 by preventing its association with KEAP1 and its subsequent ubiquitination. Binds to OTUD7B and inhibits its deubiquitinating activity. Enhances RELA nuclear translocation. Binds to a number of mRNAs containing multiple copies of GG or CC motifs and partially inhibits their translation but dissociates following oxidative stress. Required for correct mitochondrial morphology and function and for autophagy of dysfunctional mitochondria. Regulates astrocyte inflammatory responses. Acts as a positive regulator of androgen receptor-dependent transcription. Prevents aggregation of SNCA. Plays a role in fertilization. Has no proteolytic activity. Has cell-growth promoting activity and transforming activity. May function as a redox-sensitive chaperone.

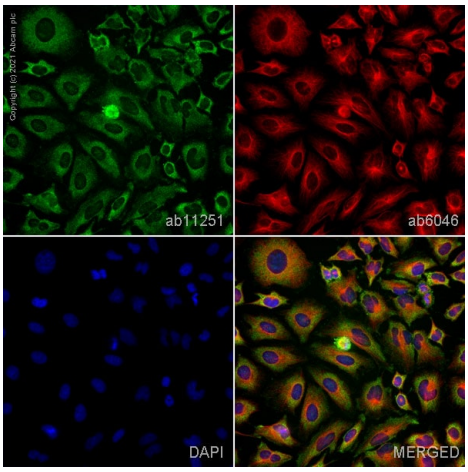
组织特异性 Highly expressed in pancreas, kidney, skeletal muscle, liver, testis and heart. Detected at slightly lower levels in placenta and brain. Detected in astrocytes, Sertoli cells, spermatogonia, spermatids and spermatozoa.

疾病相关 Defects in PARK7 are the cause of Parkinson disease type 7 (PARK7) [MIM:606324]. A neurodegenerative disorder characterized by resting tremor, postural tremor, bradykinesia, muscular rigidity, anxiety and psychotic episodes. PARK7 has onset before 40 years, slow progression and initial good response to levodopa. Some patients may show traits reminiscent of amyotrophic lateral sclerosis-parkinsonism/dementia complex (Guam disease).

序列相似性 Belongs to the peptidase C56 family.

翻译后修饰	Sumoylated on Lys-130 by PIAS2 or PIAS4; which is enhanced after ultraviolet irradiation and essential for cell-growth promoting activity and transforming activity. Cys-106 is easily oxidized to sulfinic acid. Undergoes cleavage of a C-terminal peptide and subsequent activation of protease activity in response to oxidative stress.
细胞定位	Cytoplasm. Nucleus. Mitochondrion. Under normal conditions, located predominantly in the cytoplasm and, to a lesser extent, in the nucleus and mitochondrion. Translocates to the mitochondrion and subsequently to the nucleus in response to oxidative stress and exerts an increased cytoprotective effect against oxidative damage. Detected in tau inclusions in brains from neurodegenerative disease patients.

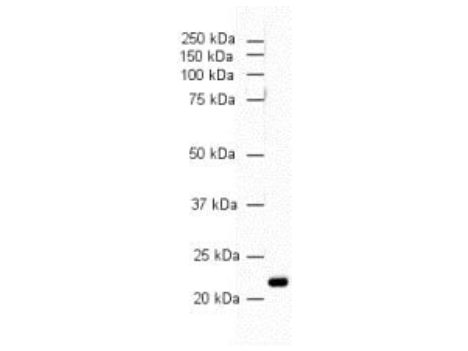
图片



Immunocytochemistry - Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] (ab11251)

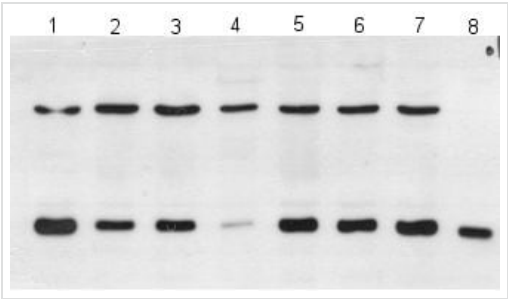
ab11251 staining PARK7/DJ1 in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab11251 at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150121**, Goat polyclonal Secondary Antibody to Mouse IgM - mu chain (Alexa Fluor® 488) at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Western blot - Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] (ab11251)

Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] (ab11251) at 1/500 dilution + HeLa whole cell lysate at 20 µg

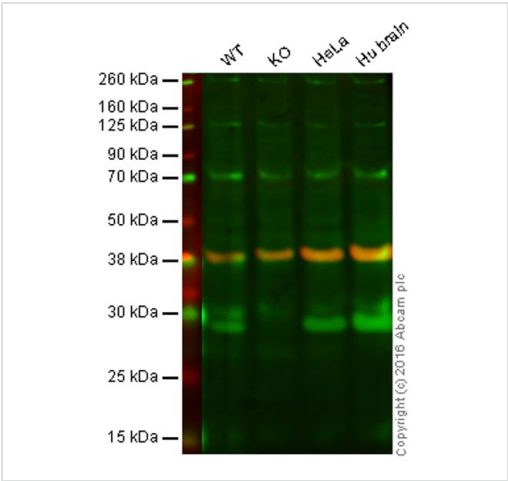


Western blot - Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] (ab11251)

Western blot using clone malphaDJ-1/E2.19 and a beta actin antibody as a loading control.

The bottom band is PARK7/DJ1, the top band is beta actin.

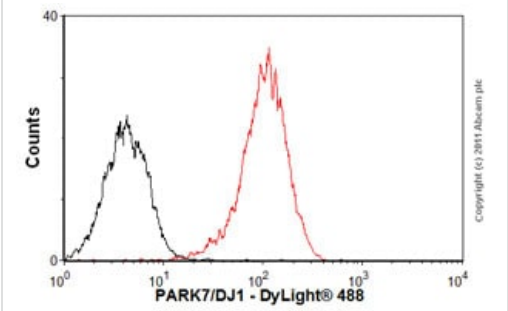
Lane 1: 293 cell lysate
Lane 2: MCF-7 cell lysate
Lanes 3-7: various different prostate cell lines
Lane 8: recombinant PARK7/DJ1 (that was used as immunogen for this antibody)



Western blot - Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] (ab11251)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: PARK7/DJ1 knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: Human brain tissue lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab11251 observed at 24 kDa. Red - loading control, **ab181602**, observed at 37 kDa.

ab11251 was shown to specifically react with PARK7/DJ1 in wild-type HAP1 cells. No band was observed when knockout samples were used. Wild-type and PARK7/DJ1 knockout samples were subjected to SDS-PAGE. ab11251 and **ab181602** (loading control to GAPDH) were diluted at 1/500 and 1/10,000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (**ab216772**) and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (**ab216777**) secondary antibodies at 1/10,000 dilution for 1hr at room temperature before imaging.



Flow Cytometry (Intracellular) - Anti-PARK7/DJ1 antibody [malphaDJ-1/E2.19] (ab11251)

Overlay histogram showing HepG2 cells stained with ab11251 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab11251, 1/100 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgM [ICIGM] (**ab91545**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HepG2 cells fixed with 4% paraformaldehyde (10

min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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