abcam

Product datasheet

Anti-PARK7/DJ1 antibody [4H4] ab119767

2 Images

Overview

Product name	Anti-PARK7/DJ1 antibody [4H4]
Description	Mouse monoclonal [4H4] to PARK7/DJ1
Host species	Mouse
Tested applications	**Suitable for:** WB, ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	ab119767 was generated against full length recombinant Human PARK7/DJ1 expressed in and purified from E. coli.
Positive control	HeLa whole cell lysate (**ab150035**) and HeLa cells in culture.
General notes	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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.07% Sodium azide Constituent: 99% PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	4H4
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab119767 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		1/10000. Detects a band of approximately 21 kDa (predicted molecular weight: 20 kDa).
ICC/IF		1/1000.

Target

Function

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.

Tissue specificity

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.

Involvement in disease

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).

Sequence similarities

Belongs to the peptidase C56 family.

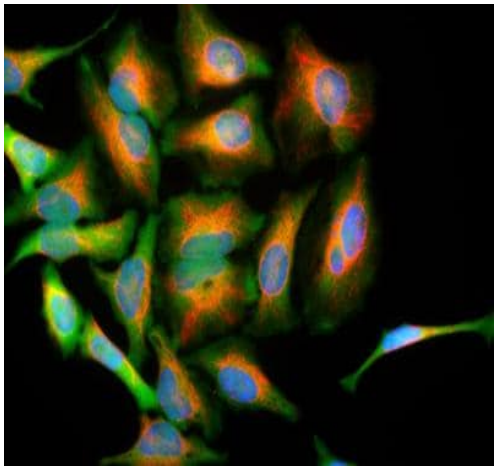
Post-translational modifications

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.

Cellular localization

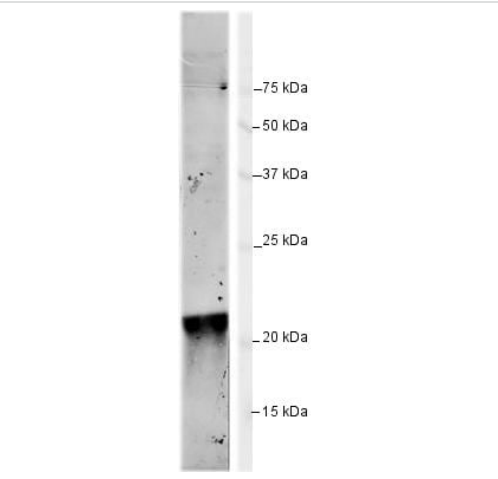
Cytoplasm. Nucleus. Mitochondrion. Under normal conditions, located predominantly in the cytoplasm and, to a lesser extent, in the nucleus and mitochondrion. Translocates to the mitochondrion and subsequently to the nucleus in response to oxidative stress and exerts an increased cytoprotective effect against oxidative damage. Detected in tau inclusions in brains from neurodegenerative disease patients.

Images



Immunocytochemistry/ Immunofluorescence - Anti-PARK7/DJ1 antibody [4H4] (ab119767)

Immunofluorescence staining of HeLa cells using ab119767, at 1/1000 (green). Also shown are Vimentin (red) and DNA (blue). ab119767 reveals strong cytoplasmic staining for PARK7/DJ1.



Western blot - Anti-PARK7/DJ1 antibody [4H4] (ab119767)

Anti-PARK7/DJ1 antibody [4H4] (ab119767) (1/10000) + HeLa whole cell lysate

Predicted band size: 20 kDa
Observed band size: 21 kDa

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