abcam

Product datasheet

Recombinant Human PARK7/DJ1 protein ab51198

3 References 2 Images

Description

Product name	Recombinant Human PARK7/DJ1 protein
Purity	> 95 % SDS-PAGE.
Expression system	Escherichia coli
Accession	Q99497
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSMASK RALVILAKGA EEMETVIPVD VMRRAGIKVT VAGLAGKDPV QCSRDVVICP DASLEDAKKE GPYDVVVLPG GNLGAQNLSE SAAVKEILKE QENRKGLIAA ICAGPTALLA HEIGFGSKVT THPLAKDKMM NGGHYTYSEN RVEKDGLILT SRGPGTSFEF ALAIVEALNG KEVAAQVKAP LVLKD
Tags	His tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab51198** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Western blot
Form	Liquid

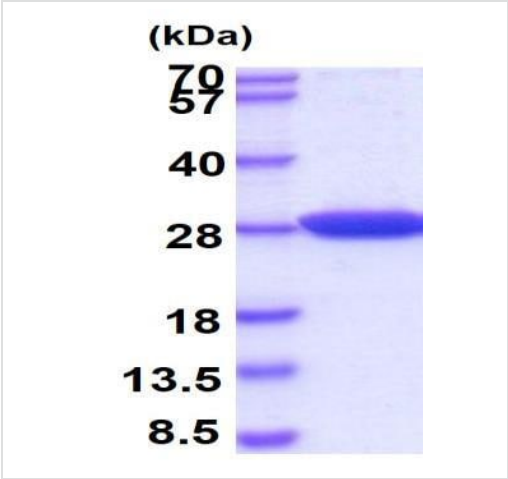
Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. pH: 8.00 Constituents: 0.316% Tris HCl, 20% Glycerol (glycerin, glycerine)

General Info

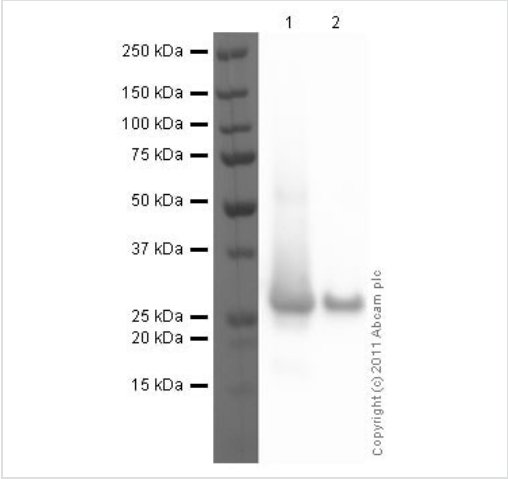
Function	Protects cells against oxidative stress and cell death. Plays a role in regulating expression or stability of the mitochondrial uncoupling proteins SLC25A14 and SLC25A27 in dopaminergic neurons of the substantia nigra pars compacta and attenuates the oxidative stress induced by calcium entry 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



SDS-PAGE - Recombinant Human PARK7/DJ1 protein (ab51198)

15% SDS-PAGE gel loaded with ab51198, recombinant human PARK7/DJ1 protein (His tag).
Predicted molecular weight 24 kDa.



Western blot - Recombinant Human PARK7/DJ1 protein (ab51198)

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