



Rabbit Anti-PARK7/DJ1 antibody

SL1306R

Product Name:	PARK7/DJ1
Chinese Name:	CAP1 抗体
Alias:	PARK7; PARK-7; Parkinson disease protein 7; Park7 protein; CAP1; DJ-1; DJ 1; SP22; Protein DJ-1; Oncogene DJ1; FLJ27376; Park 7; Parkinson disease (autosomal recessive early onset) 7; RNA binding protein regulatory subunit; RS; SP22; CAP1 HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Horse,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=0.2µg/TestIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	20kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CAP1:101-189/189
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	PARK7/DJ1 is a ubiquitously expressed protein involved in various cellular processes including cell proliferation, RNA-binding, and oxidative stress. The protein has been found to colocalize within a subset of pathologic tau inclusions in a diverse group of neurodegenerative disorders known as tauopathies (Rizzu et al. 2004). Defects in PARK7/DJ1 are the cause of autosomal recessive early-onset Parkinson's disease 7

(PARK7). Parkinson's disease (PD) is a complex, multifactorial disorder that typically manifests after the age of 50 years. The disease is characterized by bradykinesia, resting tremor, muscular rigidity and postural instability. The pathology involves the loss of dopaminergic neurons in the substantia nigra and the presence of Lewy bodies (intraneuronal accumulations of aggregated proteins), in surviving neurons in various areas of the brain. PARK7 is characterized by onset before 40 years and slow progression. It has also been suggested that PARK7/DJ1 is a mitogen dependent oncogene product involved in Ras related signal transduction pathways.

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.

Subcellular Location:

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.

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.

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.

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).

Similarity:

Belongs to the peptidase C56 family.

SWISS:

Q99497

Gene ID:

11315

Database links:

[Entrez Gene: 11315](#)Human

[Entrez Gene: 57320](#)Mouse

[Entrez Gene: 117287](#)Rat

[Entrez Gene: 511268](#)Cow

[Entrez Gene: 479595](#)Dog

[Omim: 602533](#)Human

[SwissProt: Q5E946](#)Cow

[SwissProt: Q99497](#)Human

[SwissProt: Q99LX0](#)Mouse

[SwissProt: O88767](#)Rat

[Unigene: 419640](#)Human

[Unigene: 277349](#)Mouse

[Unigene: 30105](#)Rat

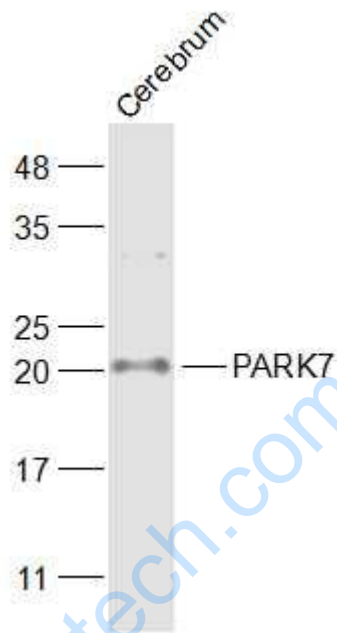
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

DJ-1蛋白是近年来新发现的一种Tumour蛋白, DJ-1能有效保护细胞抵抗氧化应激, 该蛋白早期主要用于Tumour方面的研究, 近年来科研人员经研究认为:DJ-

1蛋白与神经退化及损伤有一定的关联。

Picture:



Sample:

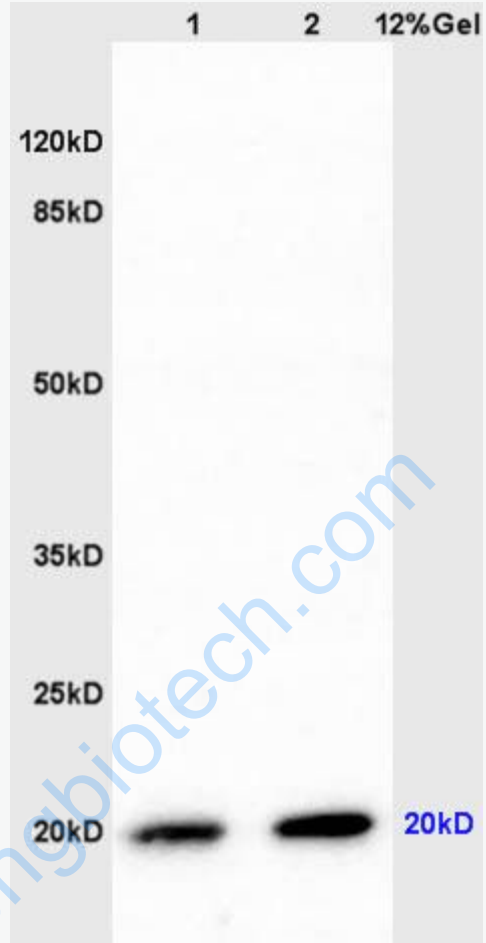
Cerebrum (Mouse) Lysate at 40 ug

Primary: Anti-PARK7 (SL1306R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 20 kD

Observed band size: 20 kD



Sample:

Lane1:Brain(Rat) lysate at 30ug;

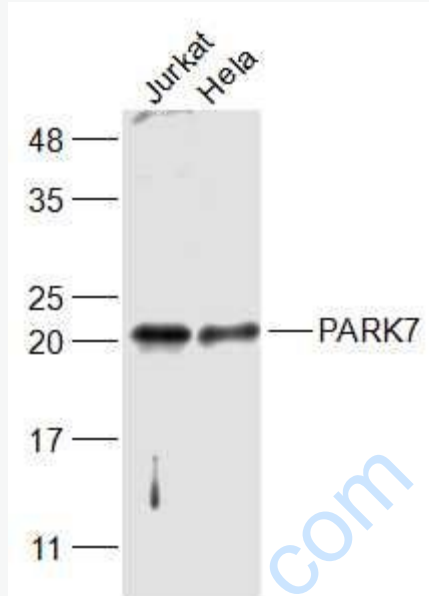
Lane2:Brain(Rat) lysate at 30ug;

Primary: Anti-CAP1/PARK7 (SL1306R) at 1:200 dilution;

Secondary: Alkaline phosphatase conjugated Goat Anti-Rabbit IgG(SL1306R) at 1:3000 dilution;

Predicted band size : 20kD

Observed band size : 20kD



Sample:

Jurkat(Human) Cell Lysate at 30 ug

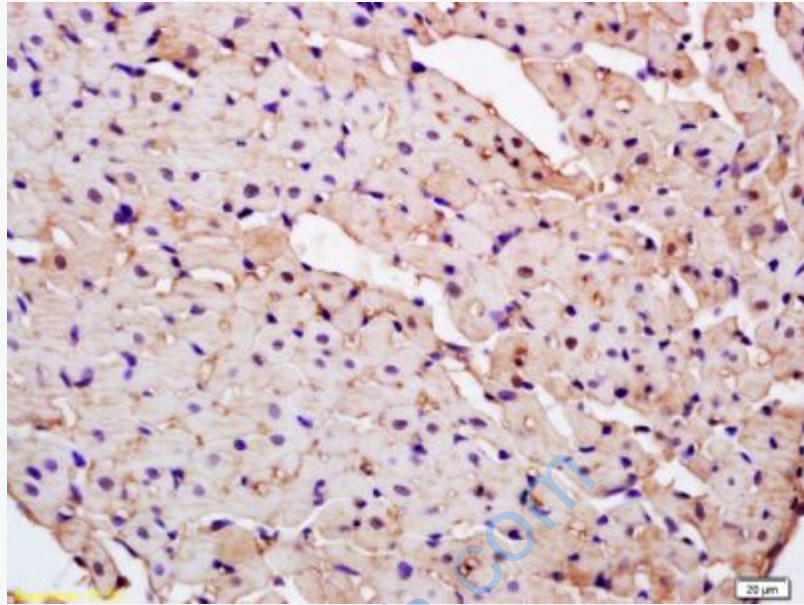
HeLa(Human) Cell Lysate at 30 ug

Primary: Anti-PARK7 (SL1306R) at 1/1000 dilution

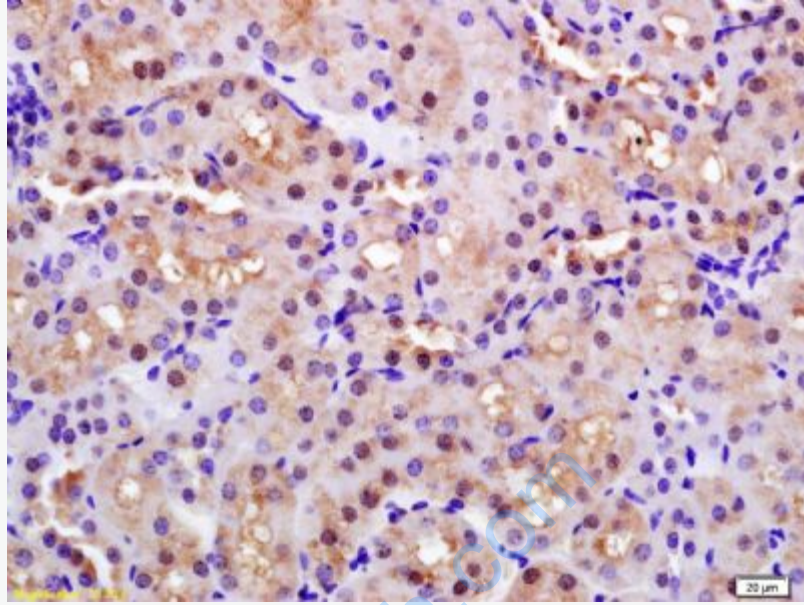
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 20 kD

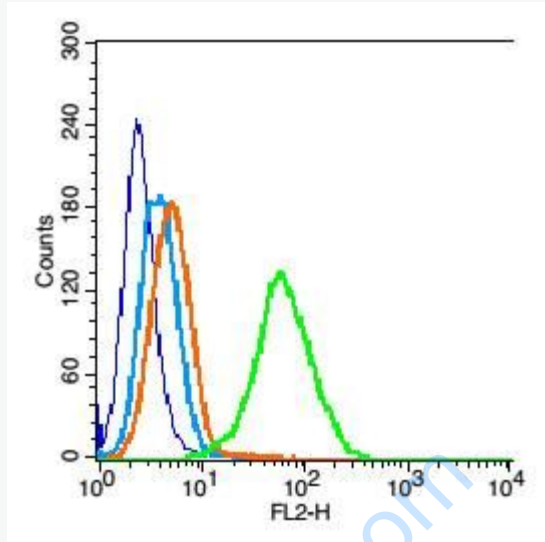
Observed band size: 20 kD



Tissue/cell: rat kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer
(normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-CAP1/PARK7 Polyclonal Antibody, Unconjugated(SL1306R)
1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-
0023) and DAB(C-0010) staining



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Incubation: Anti-CAP1/PARK7 Polyclonal Antibody, Unconjugated(SL1306R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: 293T cells(blue).

Primary Antibody: Rabbit Anti-PARK7/CAP1 antibody(SL1306R), Dilution: 0.2 μ g in 100 μ L 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG (orange) ,used under the same conditions.

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

Primary antibody (SL1306R) were incubated for 30 min on the ice, followed by 1 X PBS containing 0.5% BSA + 1 0% goat serum (15 min) to block non-specific protein-protein interactions. Then the Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.



The blue histogram is unstained cells (Hepg2 cells)

concentration 1:50

The Wathet Blue histogram is cells stained with secondary antibody alone.

The Orange histogram is cells stained with rabbit IgG isotype control antibody plus secondary antibody.

The green histogram is cells stained with Rabbit Anti-PARK7/CAP1 antibody (SL1306R) plus secondary antibody.

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