Rabbit PARK7 Polyclonal Antibody | anti-PARK7 antibody

PARK7 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321004	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Western Blot**

PRODUCT SYNONYMS

PARK7; Polyclonal Antibody; PARK7 Antibody; CAP1; DJ-1; DJ1; DJ1 protein; Epididymis secretory sperm binding protein Li 67p; FLJ27376; FLJ34360; FLJ92274; HEL S 67p; Oncogene DJ1; OTTHUMP00000001348; OTTHUMP00000001349; OTTHUMP00000001350; OTTHUMP00000001351; PARK7_HUMAN; Parkinson disease (autosomal recessive; early onset) 7; Parkinson disease protein 7; Parkinson protein 7; Protein DJ-1; SP22; anti-PARK7 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PARK7 antibody detects endogenous levels of total PARK7
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	189
Applicable Applications for anti-PARK7 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PARK7
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 (at protein level). Detected in astrocytes, Sertoli cells, spermatogonia, spermatids and spermatozoa. Expressed by pancreatic islets at higher levels than surrounding exocrine tissues (PubMed:22611253).
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IF (Immunofluorescence)
AAA321004 staining HuvEc by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

WB (Western Blot)
Western blot analysis on HuvEc cell lysate using PARK7 Antibody, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PARK7 antibody	Description: DJ-1 associated with autosomal recessive early onset parkinsonism. Involved in the oxidative stress response. Three cysteines in DJ-1 may be oxidized to cysteine sulphonic acid in the cellular response to H2O2. Loss of DJ-1 function may lead to neurodegeneration. Function: Protein and nucleotide deglycase that catalyzes the deglycation of the Maillard adducts formed between amino groups of proteins or nucleotides and reactive carbonyl groups of glyoxals (PubMed:25416785, PubMed:28596309). Thus, functions as a protein deglycase that repairs methylglyoxal-and glyoxal-glycated proteins, and releases repaired proteins and lactate or glycolate, respectively. Deglycates cysteine, arginine and lysine residues in proteins, and thus reactivates these proteins by reversing glycation by glyoxals. Acts on early glycation intermediates (hemithioacetals and aminocarbinols), preventing the formation of advanced glycation endproducts (AGE) that cause irreversible damage (PubMed:25416785, PubMed:28013050, PubMed:26995087). Also functions as a nucleotide deglycase able to repair glycated guanine in the free nucleotide pool (GTP, GDP, GMP, dGTP) and in DNA and RNA. Is thus involved in a major nucleotide repair system named guanine glycation repair (GG repair), dedicated to reversing methylglyoxal and glyoxal damage via nucleotide sanitization and direct nucleic acid repair (PubMed:28596309). Also displays an apparent glyoxalase activity that in fact reflects its deglycase activity (PubMed:22523093). Plays an important role in cell protection against oxidative stress and cell death acting as oxidative stress sensor and redox-sensitive chaperone and protease; functions probably related to its primary function (PubMed:17015834, PubMed:20304780, PubMed:18711745, PubMed:12796482, PubMed:19229105, PubMed:25416785, PubMed:26995087). It is involved in neuroprotective mechanisms like the stabilization of NFE2L2 and PINK1 proteins, male fertility as a positive regulator of androgen signaling pathway as well as cell growth and transformation through, for instance, the modulation of NF-kappa-B signaling pathway (PubMed:12612053, PubMed:15502874, PubMed:14749723, PubMed:17015834, PubMed:21097510, PubMed:18711745). Eliminates hydrogen peroxide and protects cells against hydrogen peroxide-induced cell death (PubMed:16390825). Required for correct mitochondrial morphology and function as well as for autophagy of dysfunctional mitochondria (PubMed:19229105, PubMed:16632486). 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 (PubMed:18711745). Regulates astrocyte inflammatory responses, may modulate lipid rafts-dependent endocytosis in astrocytes and neuronal cells (PubMed:23847046). In pancreatic islets, involved in the maintenance of mitochondrial reactive oxygen species (ROS) levels and glucose homeostasis in an age-and diet dependent manner. Protects pancreatic beta cells from cell death induced by inflammatory and cytotoxic setting (By similarity). Binds to a number of mRNAs containing multiple copies of GG or CC motifs and partially inhibits their translation but dissociates following oxidative stress (PubMed:18626009). Metal-binding protein able to bind copper as well as toxic mercury ions, enhances the cell protection mechanism against induced metal toxicity (PubMed:23792957). In macrophages, interacts with the NADPH oxidase subunit NCF1 to direct NADPH oxidase-dependent ROS production, and protects against sepsis (By similarity). Subunit Structure: Homodimer (PubMed:12851414, PubMed:12796482, PubMed:12855764). Binds EFCAB6/DJBP and PIAS2 (PubMed:11477070, PubMed:12851414, PubMed:12612053). Part of a ternary complex containing PARK7, EFCAB6/DJBP and AR (PubMed:12612053). Interacts (via N-terminus) with OTUD7B (PubMed:21097510). Interacts with BBS1, HIPK1, CLCF1 and MTERF (PubMed:16390825, PubMed:21097510). Forms a complex with PINK1 and PRKN (PubMed:19229105). Interacts (via C-terminus) with NCF1; the interaction is enhanced by LPS and modulates NCF1 phosphorylation and membrane translocation (By similarity). 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. Similarity: Belongs to the peptidase C56 family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	183227678
NCBI GeneID	11315
NCBI Accession #	NP_001116849.1
NCBI GenBank Nucleotide #	NM_001123377.1
UniProt Accession #	Q99497; O14805; Q6DR95; Q7LFU2; B2R4Z1
Molecular Weight	Observed: 20 kDa; 26 kDa Predicted: 20 kDa
NCBI Official Full Name	protein/nucleic acid deglycase DJ-1
NCBI Official Synonym Full Names	Parkinsonism associated deglycase
NCBI Official Symbol	PARK7
NCBI Official Synonym Symbols	DJ1; DJ-1; GATD2; HEL-S-67p
NCBI Protein Information	protein/nucleic acid deglycase DJ-1
UniProt Protein Name	Protein/nucleic acid deglycase DJ-1
UniProt Gene Name	**PARK7**
UniProt Synonym Gene Names	DJ-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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