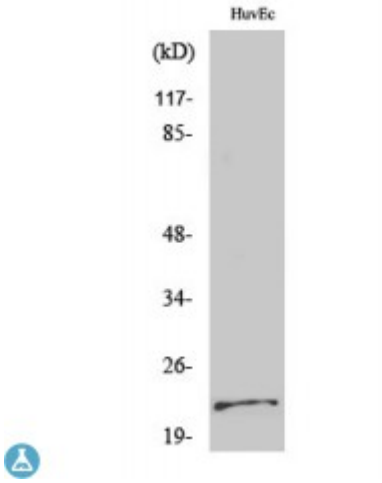
Anti-PARK7 antibody



Description	Rabbit polyclonal to PARK7.

Model	STJ94957
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human PARK7
Immunogen Region	40-120 aa, Internal
Gene ID	11315
Gene Symbol	PARK7
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:10000
Specificity	PARK7 Polyclonal Antibody detects endogenous levels of PARK7 protein.
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.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Protein/nucleic acid deglycase DJ-1 Maillard deglycase Oncogene DJ1 Parkinson disease protein 7 Parkinsonism-associated deglycase Protein DJ-1 DJ-1

Molecular Weight	22 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:16369OMIM:168600
Alternative Names	Protein/nucleic acid deglycase DJ-1 Maillard deglycase Oncogene DJ1 Parkinson disease protein 7 Parkinsonism-associated deglycase Protein DJ-1 DJ-1
Function	Plays an important role in cell protection against oxidative stress and cell death acting as oxidative stress sensor and redox-sensitive chaperone and protease . 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 . Its involvement in protein repair could also explain other unrelated functions. Eliminates hydrogen peroxide and protects cells against hydrogen peroxide-induced cell death . Required for correct mitochondrial morphology and function as well as for autophagy of dysfunctional mitochondria . 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 . Regulates astrocyte inflammatory responses, may modulate lipid rafts-dependent endocytosis in astrocytes and neuronal cells . Binds to a number of mRNAs containing multiple copies of GG or CC motifs and partially inhibits their translation but dissociates following oxidative stress . Metal-binding protein able to bind copper as well as toxic mercury ions, enhances the cell protection mechanism against induced metal toxicity . In macrophages, interacts with the NADPH oxidase subunit NCF1to direct NADPH oxidase-dependent ROS production, and protects against sepsis . Has been described as a protein deglycase that repairs methylglyoxal- and glyoxal-glycated amino acids and 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) . However, another work ascribes the deglycation activity to a TRIS buffer artifact .
Cellular Localization	Cell membrane Cytoplasm Nucleus Membrane raft 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 . Membrane raft localization in astrocytes and neuronal cells requires palmitoylation.

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.