

Rabbit Parkin Polyclonal Antibody | anti-PRKN antibody

Parkin Antibody

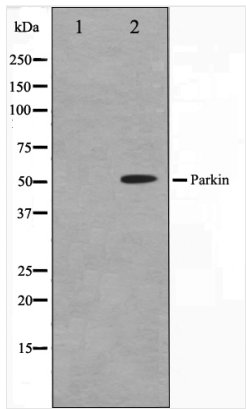
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320876	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Parkin; Polyclonal Antibody; Parkin Antibody; AR JP; E3 ubiquitin ligase; E3 ubiquitin protein ligase parkin; E3 ubiquitin-protein ligase parkin; FRA6E; LPRS 2; LPRS2; PARK 2; Park2; Parkin 2; Parkinson disease (autosomal recessive juvenile) 2; Parkinson disease (autosomal recessive; juvenile) 2; parkin; Parkinson disease protein 2; Parkinson juvenile disease protein 2; Parkinson protein 2 E3 ubiquitin protein ligase; Parkinson protein 2; E3 ubiquitin protein ligase (parkin); PDJ; PRKN 2; PRKN; PRKN2; PRKN2_HUMAN; Ubiquitin E3 ligase PRKN; anti-PRKN antibody

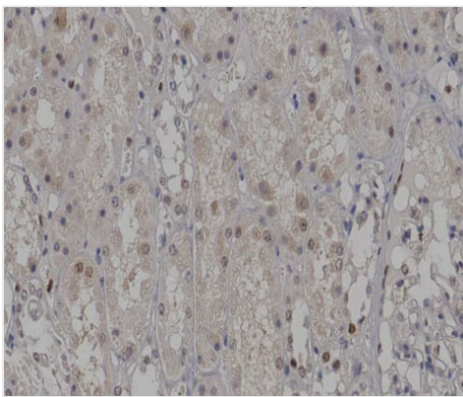
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Parkin antibody detects endogenous levels of total Parkin
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	465
Applicable Applications for anti-PRKN antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Parkin
Subcellular Location	Cytoplasm > Cytosol. Nucleus. Endoplasmic Reticulum. Mitochondrion. Mainly localizes in the cytosol. Co-localizes with SYT11 in neutrites. Co-localizes with SNCAIP in brainstem Lewy bodies. Relocates to dysfunctional mitochondria that have lost the mitochondrial membrane potential; recruitment to mitochondria is PINK1-dependent.
Tissue Specificity	Highly expressed in the brain including the substantia nigra. Expressed in heart, testis and skeletal muscle. Expression is down-regulated or absent in tumor biopsies, and absent in the brain of PARK2 patients. Overexpression protects dopamine neurons from kainate-mediated apoptosis. Found in serum (at protein level).
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis on HeLa cell lysate using Parkin Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA320876 at 1/100 staining human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-PRKN antibody	Description: PARK2 Functions within a multiprotein E3 ubiquitin ligase complex, catalyzing the covalent attachment of ubiquitin moieties onto substrate proteins. These substrates include SYT11, CCNE1, GPR37, STUB1, a 22 kDa O-linked glycosylated isoform of SNCAIP, SEPT5 and AIMP2. May play a more general role in the ubiquitin proteasomal pathway by participating in the removal and/or detoxification of abnormally folded or damaged protein. Loss of this ubiquitin ligase activity appears to be the mechanism underlying pathogenesis of PARK2. Function: Functions within a multiprotein E3 ubiquitin ligase complex, catalyzing the covalent attachment of ubiquitin moieties onto substrate proteins, such as BCL2, SYT11, CCNE1, GPR37, RHOT1/MIRO1, MFN1, MFN2, STUB1, SNCAIP, SEPT5, TOMM20, USP30, ZNF746 and AIMP2 (PubMed:10973942, PubMed:10888878, PubMed:11431533, PubMed:12150907, PubMed:12628165, PubMed:16135753, PubMed:21376232, PubMed:23754282, PubMed:23620051, PubMed:24660806, PubMed:24751536). Mediates monoubiquitination as well as 'Lys-6', 'Lys-11', 'Lys-48'-linked and 'Lys-63'-linked polyubiquitination of substrates depending on the context (PubMed:19229105, PubMed:20889974, PubMed:25621951). Participates in the removal and/or detoxification of abnormally folded or damaged protein by mediating 'Lys-63'-linked polyubiquitination of misfolded proteins such as PARK7: 'Lys-63'-linked polyubiquitinated misfolded proteins are then recognized by HDAC6, leading to their recruitment to aggresomes, followed by degradation (PubMed:17846173, PubMed:19229105). Mediates 'Lys-63'-linked polyubiquitination of a 22 kDa O-linked glycosylated isoform of SNCAIP, possibly playing a role in Lewy-body formation (PubMed:11590439, PubMed:11431533, PubMed:19229105, PubMed:11590439, PubMed:15728840). Mediates monoubiquitination of BCL2, thereby acting as a positive regulator of autophagy (PubMed:20889974). Promotes the autophagic degradation of dysfunctional depolarized mitochondria (mitophagy) by promoting the ubiquitination of mitochondrial proteins such as TOMM20, RHOT1/MIRO1 and USP30 (PubMed:19029340, PubMed:19966284, PubMed:23620051, PubMed:24896179, PubMed:25527291). Preferentially assembles 'Lys-6', 'Lys-11'-and 'Lys-63'-linked polyubiquitin chains following mitochondrial damage, leading to mitophagy (PubMed:25621951). Mediates 'Lys-48'-linked polyubiquitination of ZNF746, followed by degradation of ZNF746 by the proteasome; possibly playing a role in the regulation of neuron death (PubMed:21376232). Limits the production of reactive oxygen species (ROS). Regulates cyclin-E during neuronal apoptosis. In collaboration with CHPF isoform 2, may enhance cell viability and protect cells from oxidative stress (PubMed:22082830). Independently of its ubiquitin ligase activity, protects from apoptosis by the transcriptional repression of p53/TP53 (PubMed:19801972). May protect neurons against alpha synuclein toxicity, proteasomal dysfunction, GPR37 accumulation, and kainate-induced excitotoxicity (PubMed:11439185). May play a role in controlling neurotransmitter trafficking at the presynaptic terminal and in calcium-dependent exocytosis. May represent a tumor suppressor gene. Subunit Structure: Forms an E3 ubiquitin ligase complex with UBE2L3 or UBE2L6. Mediates 'Lys-63'-linked polyubiquitination by associating with UBE2V1. Part of a SCF-like complex, consisting of PRKN, CUL1 and FBXW7. Interacts with SNCAIP. Binds to the C2A and C2B domains of SYT11. Interacts and regulates the turnover of SEPT5. Part of a complex, including STUB1, HSP70 and GPR37. The amount of STUB1 in the complex increases during ER stress. STUB1 promotes the dissociation of HSP70 from PRKN and GPR37, thus facilitating PRKN-mediated GPR37 ubiquitination. HSP70 transiently associates with unfolded GPR37 and inhibits the E3 activity of PRKN, whereas, STUB1 enhances the E3 activity of PRKN through promotion of dissociation of HSP70 from PRKN-GPR37 complexes. Interacts with PSMD4 and PACRG. Interacts with LRRK2. Interacts with RANBP2. Interacts with SUMO1 but not SUMO2, which promotes nuclear localization and autoubiquitination. Interacts (via first RING-type domain) with AIMP2 (via N-terminus). Interacts with PSMA7 and RNF41. Interacts with PINK1. Interacts with CHPF, the interaction with isoform 2 may facilitate PRKN transport into the mitochondria. Interacts with MFN2 (phosphorylated), promotes PRKN localization in dysfunctional depolarized mitochondria. Interacts with FBXO7; this promotes translocation to dysfunctional depolarized mitochondria. Interacts with heat shock protein 70 family members, including HSPA1L, HSPA1A and HSPA8; interaction HSPA1L promotes translocation to damaged mitochondria. Interacts with BAG4 and, to a lesser extent, BAG5; interaction with BAG4 inhibits translocation to damaged mitochondria. Forms a complex with PINK1 and PARK7 (PubMed:19229105). Post-translational Modifications: Auto-ubiquitinates in an E2-dependent manner leading to its own degradation (PubMed:19229105). Also polyubiquitinated by RNF41 for proteasomal degradation. S-nitrosylated. The inhibition of PRKN ubiquitin E3 ligase activity by S-nitrosylation could contribute to the degenerative process in PD by impairing the ubiquitination of PRKN substrates. Phosphorylation at Ser-65 by PINK1 contributes to activate PRKN activity. It is however not sufficient and requires binding to phosphorylated ubiquitin as well. Similarity: The ubiquitin-like domain binds the PSMD4 subunit of 26S proteasomes. The RING-type 1 zinc finger domain is required to repress p53/TP53 transcription. Members of the RBR family are atypical E3 ligases. They interact with the E2 conjugating enzyme UBE2L3 and function like HECT-type E3 enzymes: they bind E2s via the first RING domain, but require an obligate trans-thiolation step during the ubiquitin transfer, requiring a conserved cysteine residue in the second RING domain (PubMed:21532592). Belongs to the RBR family. Parkin subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	169790969
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NCBI GeneID	5071
NCBI Accession #	NP_004553.2
NCBI GenBank Nucleotide #	NM_004562.2
UniProt Accession #	O60260; Q5TFV8; Q5VVX4; Q6Q2I6; Q8NI41; Q8NI43; Q8NI44; Q8WW07; A3FG77; A8K975; D3JZW7; D3K2X0
Molecular Weight	Observed: 52 kDa Predicted: 52 kDa
NCBI Official Full Name	E3 ubiquitin-protein ligase parkin isoform 1
NCBI Official Synonym Full Names	parkin RBR E3 ubiquitin protein ligase
NCBI Official Symbol	PRKN
NCBI Official Synonym Symbols	PDJ; AR-JP; LPRS2; PARK2
NCBI Protein Information	E3 ubiquitin-protein ligase parkin
UniProt Protein Name	E3 ubiquitin-protein ligase parkin
UniProt Gene Name	PRKN
UniProt Synonym Gene Names	PARK2; Parkinson disease protein 2

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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/parkin-antibody-immunohistochemistry-western-blot-elisa/320876>