

Product Specification Sheet

Parkin Antibodies

Cat. PARK11-S	Rabbit Anti-Human Parkin antiserum #1	SIZE: 100 ul
Cat. PARK11-A	Rabbit Anti-Human Parkin IgG #1 (aff pure)	SIZE: 100 ug
Cat. PARK11-P	Human Parkin Control/blocking peptide #1	SIZE: 100 ug

Reconstitute powder in PBS at 1mg/ml

Parkinson's disease (**PD**) is a common neurodegenerative disorder with a lifetime incidence of approximately 2 percent; the clinical manifestations of this neurodegenerative disorder include resting tremor, muscular rigidity, bradykinesia, and postural instability. Parkin gene, mutations in this gene are reported in early autosomal-recessive form of PD, however these mutations do not degenerate **Lewy bodies**. The Parkin gene product (**Parkin**) is involved in protein degradation as a ubiquitin protein ligase, the known substrates of Parkin include Pael-R (Parkin-associated endothelin receptor-like receptor), Ubiquitination of Pael-R by Parkin leads to its degradation in the proteasome, however failure to ubiquitinate it leads to death of neuron.

Parkin is a 465aa (isoforms 1) protein in human (chr6 6q25.2-q27) and mouse, expressed in many tissues, including brain, heart, testis, and skeletal muscle. Parkin isoforms 2 (437-aa) lacks exon 5 (19-206 aa) and the isoforms 3 (316 aa) lacks exons 3-5. The major product is ~52 kDa. However, several alternatively spliced forms (22-65 kDa) have been detected in mouse and human tissues. In the brain, Parkin is expressed in various regions including substantia nigra.

FUNCTION: Functions within a multiprotein E3 ubiquitin ligase complex, catalyzing the covalent attachment of ubiquitin moieties onto substrate proteins.

SUBCELLULAR LOCATION: Cytoplasm. Note=Co-localizes with STY11 in neurites. Co-localizes with SNCAIP in brainstem Lewy bodies. Nucleus.

SIMILARITY: Contains 2 IBR-type zinc fingers.

Protein name Parkin

Synonyms EC 6.3.2.-

Ubiquitin E3 ligase PRKN, Parkinson juvenile disease protein 2

Parkinson disease protein 2

Gene name Name: PARK2; Synonyms: PRKN

Source of Antigen and Antibodies

Antigen	23aa peptide of human PARK isoform 1 (protein accession #O60260, refs 1) Designated (PARK11-P or control peptide) . conjugated to KLH; Epitope location ~ C-terminus
Ab Host/type	Rabbit, polyclonal Aff pure IgG(cat #PARK11-A) purified over the antigen column
Ab Format	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder

Supplied in Buffer: 0.05% azide

Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer:** PBS+0.1% BSA

Control/blocking peptide

100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of affinity pure antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

Human PARK11-P peptide sequence is conserved in alternatively spliced isoforms (isoform 1, 465 aa; isoforms 2, 437 aa; and isoform 3, 316 aa;). It is also highly conserved in mouse and rat (95%), and drosophila's Parkin (69%). No significant homology of PARK11-P is seen with ubiquitin or any other proteins. Antibody cross-reactivity with Parkin from other species is not known. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity

General References:

(1) Kitada T et al (1998) Nature 392, 605-608; (2) Takahashi H et al (1994) Neurology 44, 437-441; Ishikawa A et al (1996) Neurology 47, 160-166; (3) Hattori SH et al (2000) Nature Genet. 25, 302-305.

Citation of ADI's antibodies for Parkin: Hase A et al, 2002, Brain Res. 930, 143-149, Characterization of Parkin in bovine peripheral nerve

*This product is for *in vitro* research use only.

Related material available from ADI

Anti-Presenilins 1, 2; Synuclein alpha and beta, APP, Amyloids, ERAB, Dopamine, dopamine transporter, and Dopamine receptors, Serotonin transporter, etc.

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