9765 Clairemont Mesa Blvd, Suite C
San Diego, CA 92124
Tel: 858.875.1900 Fax: 858.622.0609

Parkin Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6402a

Specification

Parkin Antibody (N-term) - Product Information

Application	WB, FC, IF, IHC-P,E
Primary Accession	O60260
Other Accession	NP_004553
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Clone Names	RB7371
Antigen Region	111-140

Parkin Antibody (N-term) - Additional Information

Gene ID 5071

Other Names
E3 ubiquitin-protein ligase parkin, 632-, Parkinson juvenile disease protein 2, Parkinson disease protein 2, PARK2, PRKN

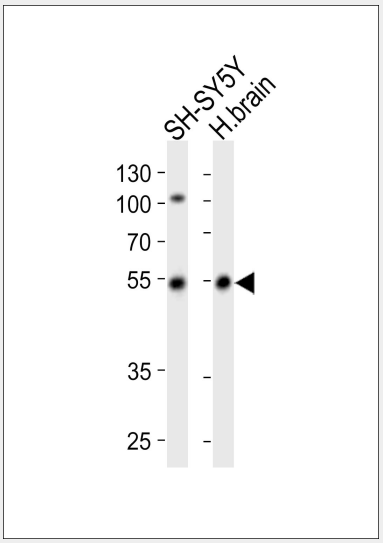
Target/Specificity
This Parkin antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 111-140 amino acids from the N-terminal region of human Parkin.

Dilution
WB~~1:250-1:1000
FC~~1:10~50
IF~~1:10~50
IHC-P~~1:10~50

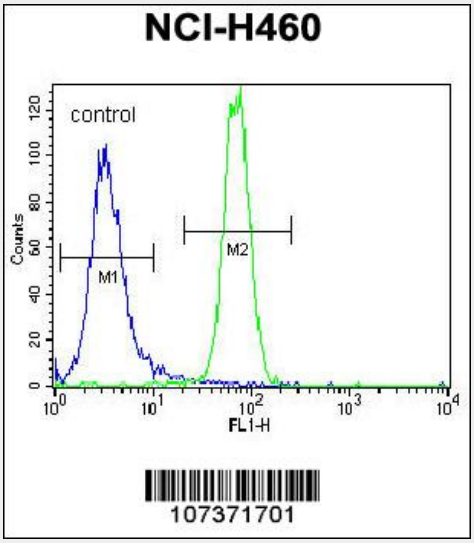
Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Parkin Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.



Western blot analysis of lysates from SH-SY5Y cell line, human brain tissue lysate (from left to right), using Park2 Antibody (N-term)(Cat. #AP6402a). AP6402a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



Parkin Antibody (N-term) (Cat. #AP6402a) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

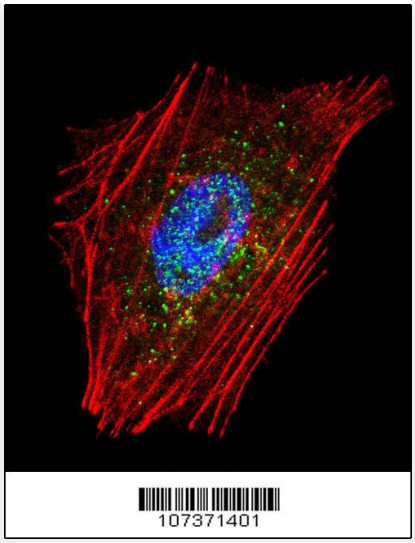
Parkin Antibody (N-term) - Protein Information

Name PARK2

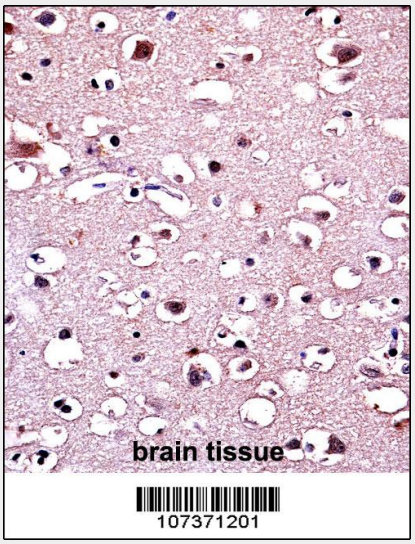
Synonyms PRKN

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, a 22 kDa O-linked glycosylated isoform of SNCAIP, SEPT5, TOMM20, USP30, ZNF746 and AIMP2. Mediates monoubiquitination as well as 'Lys-48'-linked and 'Lys- 63'-linked polyubiquitination of substrates depending on the context. 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. Mediates 'Lys-63'-linked polyubiquitination of SNCAIP, possibly playing a role in Lewy-body formation. Mediates monoubiquitination of BCL2, thereby acting as a positive regulator of autophagy. Promotes the autophagic degradation of dysfunctional depolarized mitochondria (mitophagy) by promoting the ubiquitination of mitochondrial proteins such as TOMM20, RHOT1/MIRO1 and USP30 (PubMed:24896179). 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. 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. Independently of its ubiquitin ligase activity, protects from apoptosis by the transcriptional repression of p53/TP53. May protect neurons against alpha synuclein toxicity, proteasomal dysfunction, GPR37 accumulation, and kainate-induced excitotoxicity. May play a role in controlling neurotransmitter trafficking at the presynaptic terminal and in calcium-dependent exocytosis. May represent a tumor suppressor gene.

Cellular Location
Cytoplasm, cytosol. Nucleus. Endoplasmic reticulum. Mitochondrion. Note=Mainly localizes in the cytosol Co-localizes with SYT11 in neutrites. Co-localizes with SNCAIP in brainstem Lewy bodies. Mitochondrial localization gradually increases with cellular growth. Also relocates to dysfunctional mitochondria that have lost the mitochondrial membrane potential; recruitment to mitochondria is PINK1-dependent



Confocal immunofluorescent analysis of Parkin Antibody (N-term)(Cat#AP6402a) with NCI-H460 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green).Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).



Parkin Antibody (N-term) (AP6402a)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Parkin Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Parkin Antibody (N-term) - Background

Parkinson is the second most common neurodegenerative disease after Alzheimers. About 1 percent of people over the age of 65 and 3 percent of people over the age of 75 are affected by the disease. The mutation is the most common cause of Parkinson disease identified to date. The function of Park2 is not well-known; however, it may play a role in the ubiquitin-mediated proteolytic pathway. Mutations in this gene are known to cause

Tissue Location
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).

Parkin Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

autosomal recessive juvenile parkinsonism. Alternative splicing of this gene produces three known products of undetermined function.

Parkin Antibody (N-term) - References

Kumru, H., et al., Ann. Neurol. 56(4):599-603 (2004). Pigullo, S., et al., Parkinsonism Relat. Disord. 10(6):357-362 (2004). Yao, D., et al., Proc. Natl. Acad. Sci. U.S.A. 101(29):10810-10814 (2004). West, A.B., et al., J. Biol. Chem. 279(28):28896-28902 (2004). Wang, F., et al., Genes Chromosomes Cancer 40(2):85-96 (2004).