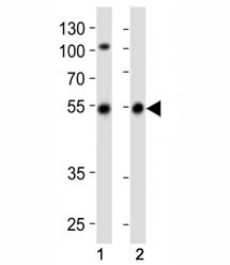
Parkin Antibody / E3 Ubiquitin Ligase Antibody (F49620)

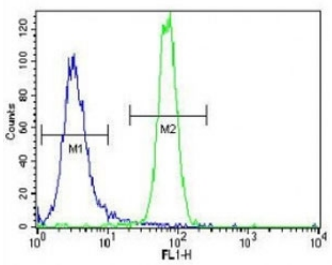
Catalog No.	Formulation	Size
F49620-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F49620-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

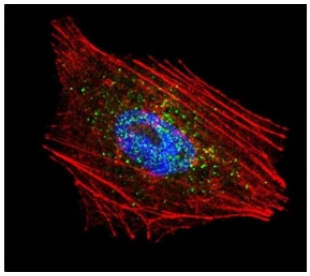
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	O60260
Applications	Western blot: 1:250-1:1000 Flow Cytometry: 1:10-1:50 Immunofluorescence: 1:10-1:50 IHC (Paraffin): 1:10-1:50
Limitations	This Parkin Antibody / E3 Ubiquitin Ligase Antibody is available for research use only.



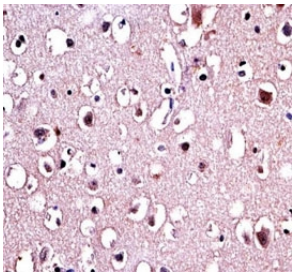
Parkin Antibody Human SH-SY5Y Neuroblastoma Cell and Brain WB. Western blot analysis of human SH-SY5Y neuroblastoma cell lysate (lane 1) and human brain tissue lysate (lane 2) was performed with Parkin Antibody at 1:1000. A prominent band is detected at approximately 55 kDa, within the expected molecular weight range of 50-60 kDa for Parkin; additional bands may represent reported Parkin isoforms. This Parkin Antibody demonstrates detection of the E3 ubiquitin ligase Parkin in human neuronal cell and brain tissue lysates.



Parkin Antibody Human NCI-H460 Lung Cancer Cell FACS. Flow cytometry analysis of human NCI-H460 lung cancer cells was performed with Parkin Antibody followed by FITC-conjugated goat anti-rabbit secondary antibody. Parkin Antibody staining (green, right histogram) shows a clear fluorescence shift compared with the negative control (blue, left histogram), demonstrating positive detection of Parkin. This Parkin Antibody demonstrates detection of the E3 ubiquitin ligase Parkin in human NCI-H460 lung cancer cells.



Parkin Antibody Human NCI-H460 Lung Cancer Cell IF. Confocal immunofluorescence analysis of human NCI-H460 lung cancer cells was performed with Parkin Antibody followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). Actin filaments were labeled with Alexa Fluor 555 Phalloidin (red), and nuclei were counterstained with DAPI (blue). Parkin staining is observed as discrete cytoplasmic and perinuclear puncta. This Parkin Antibody demonstrates cellular localization of the E3 ubiquitin ligase Parkin in human NCI-H460 lung cancer cells.



Parkin Antibody Human Brain Neuronal IHC. IHC staining of FFPE human brain tissue was performed with Parkin Antibody. Positive Parkin staining is observed in neuronal cells, with predominantly cytoplasmic signal. This Parkin Antibody demonstrates localization of the E3 ubiquitin ligase Parkin in human brain tissue, supporting its use in studies of neuronal Parkin expression and mitochondrial quality control.

Description

Parkin Antibody / E3 Ubiquitin Ligase Antibody detects Parkin, a RING-between-RING (RBR) E3 ubiquitin ligase encoded by the PRKN gene, historically designated PARK2. Parkin participates in ubiquitin-dependent protein regulation and is particularly important in mitochondrial quality control. Its close association with PINK1-dependent mitophagy and inherited forms of Parkinson disease has made Parkin an extensively studied protein in neuroscience, mitochondrial biology, autophagy and neurodegeneration.

Parkin functions as an E3 ubiquitin ligase that transfers ubiquitin to selected protein substrates. Under normal conditions, Parkin is maintained largely in an autoinhibited state. Following mitochondrial damage and loss of mitochondrial membrane potential, the kinase PINK1 accumulates on the outer mitochondrial membrane. PINK1 phosphorylates ubiquitin and Parkin, promoting Parkin activation and recruitment to damaged mitochondria. A Parkin Antibody can therefore be useful for investigating expression and localization of a central component of the PINK1-Parkin mitochondrial quality-control pathway.

Activated Parkin ubiquitinates multiple proteins on the outer mitochondrial membrane, generating ubiquitin signals that help recruit downstream machinery involved in mitochondrial turnover. These events contribute to mitophagy, a selective form of autophagy through which damaged or dysfunctional mitochondria can be removed. The PINK1-Parkin pathway is consequently an important experimental model for studying how cells recognize mitochondrial damage and maintain a functional mitochondrial population.

PRKN is also strongly associated with Parkinson disease research. Pathogenic variants in PRKN are an established cause of autosomal recessive juvenile and early-onset parkinsonism. Loss or impairment of Parkin activity can interfere with ubiquitin signaling and mitochondrial homeostasis, providing an important connection between mitochondrial dysfunction and mechanisms of neurodegeneration. Parkin is therefore studied alongside PINK1 and other proteins involved in mitochondrial dynamics, oxidative stress, autophagy and neuronal survival.

NSJ Bioreagents offers Parkin Antibody reagents for investigating Parkin expression and function. An E3 Ubiquitin Ligase Antibody targeting Parkin can support research into ubiquitination, PINK1-Parkin signaling, mitophagy, mitochondrial quality control, Parkinson disease and molecular mechanisms contributing to neurodegeneration.

Researchers studying Parkin in mitophagy and mitochondrial quality control can explore our Mitochondria Marker Antibody page for additional targets involved in mitochondrial function, dynamics and homeostasis.

Application Notes

Titration of the Parkin Antibody / E3 Ubiquitin Ligase Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 111-140 from the human protein was used as the immunogen for this Parkin antibody.

Storage

Aliquot the Parkin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Parkin antibody, PRKN antibody, PARK2 antibody, E3 Ubiquitin Ligase Parkin antibody, Parkin RBR E3 Ubiquitin Protein Ligase antibody, Parkinson Disease Protein 2 antibody

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