

Background

Parkin is a crucial regulator of mitochondrial homeostasis and plays a pivotal role in mitophagy, the process of selectively removing damaged mitochondria. Upon mitochondrial depolarization, PINK1 kinase phosphorylates ubiquitin and Parkin at their respective serine 65 residues, initiating Parkin translocation to damaged mitochondria. Phosphorylation of Parkin is a key post-translational modification that activates its E3 ubiquitin ligase activity and promotes mitochondrial clearance. This antibody enables researchers to investigate the dynamics of Parkin phosphorylation and its impact on mitophagy in various cellular and disease contexts. With its high specificity and sensitivity, the Phospho-Parkin (pS65) antibody provides valuable insights into the mechanisms underlying mitochondrial quality control and may hold therapeutic implications in neurodegenerative diseases associated with mitochondrial dysfunction.

Application(s)

Western blotting. For all applications, optimal conditions should be determined by the end user.

Product Specifications

Source	A synthetic peptide surrounding pS65 of human Parkin
Immunogen	A synthetic peptide surrounding phosphorylated serine 65 (pS65) of Parkin
Purification	Affinity chromatography followed by an immunodepletion using control peptides
Specificity	Detects Parkin only when phosphorylated at serine 65 (pS65)
Buffer	Phosphate-buffered saline with 50% glycerol
Molecular Weight	~52 kDa (native)
Quantity	100 µl
Storage	Store at +4°C. Avoid storage at lower temperatures

Product QC

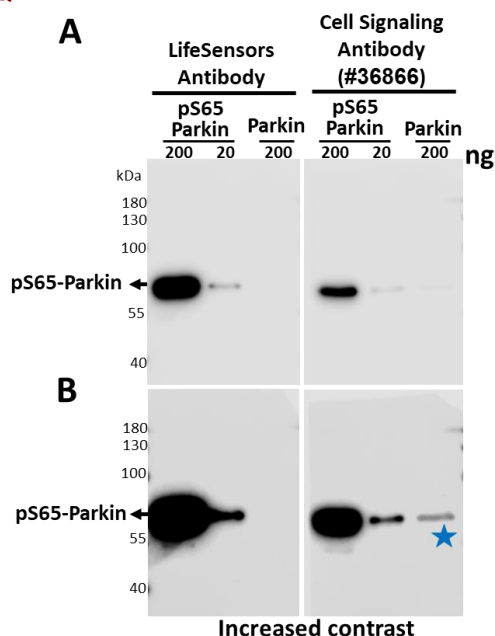


Figure. (A) Western blot of recombinant His₆-SUMO-pS65-Parkin and non-phosphorylated Parkin at indicated concentrations probed with LifeSensors' pS65-Parkin antibody (left panel) and Cell Signaling's pS65-Parkin antibody (right panel) at 1:1000 dilutions (60pg/ml final antibody concentration). LifeSensors' antibody has a ~9-fold greater affinity for pS65-Parkin than Cell Signaling's antibody (chemiluminescent quantitation not shown).

(B) Increased contrast of the same blots showing that LifeSensors' antibody does not detect non-phosphorylated Parkin, which is detected with the Cell Signaling antibody (indicated by blue colored star), indicating higher specificity for pS65-Parkin of LifeSensors' antibody.

Left Panel: LifeSensors pS65-Parkin rabbit polyclonal antibody (0.06µg/ml stock, 1:1000 dilution)

Right Panel: Cell Signaling pS65 rabbit monoclonal antibody, Cat #36866 (0.06µg/ml stock, 1:1000 as recommended)

References

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