

His₆ - Parkin (PARK2)

Cat. No. SBB-CE0055
Lot. No. 192660055



South Bay Bio

His₆ - Parkin

Parkin (Parkinson juvenile disease protein 2) is a ~52 kDa E3 Ligase enzyme protein, encoded by PARK2 gene. It plays an important role in the ubiquitin-proteasome system and acts as a regulator of protein breakdown. Parkin is located in the cytoplasm until a sustained depolarization occurs after which it is translocated to the mitochondrial membrane and induces the degradation of various membrane proteins. Parkin mutation leads to the accumulation of misfolded, aggregated proteins and degenerated mitochondria. The role of these changes in the pathomechanism of neurodegenerative diseases is well-known. Parkin mutation is responsible for about 50% of familial cases and for 10 to 20% of youth cases. Present views are that the improper regulation of protein aggregation and a dysfunction of the ubiquitin-proteasome system may be the common pathway of sporadic and hereditary Parkinson's disease. In vitro, Parkin can be activated by treatment with recombinant PINK1, or addition of low concentrations of pS65-phosphoubiquitin. Parkin has been reported to generate poly-Ubiquitin chains in K6, K11, K48, and K63 linkages both in vitro and in vivo. This recombinant protein (human) has been expressed and purified from Sf9 insect cells and has an N-terminal 6x His-Tag.

Product Information

Quantity: 50 µg Molecular Weight: 52 kDa

Concentration: 18 µM, 0.9 mg/mL

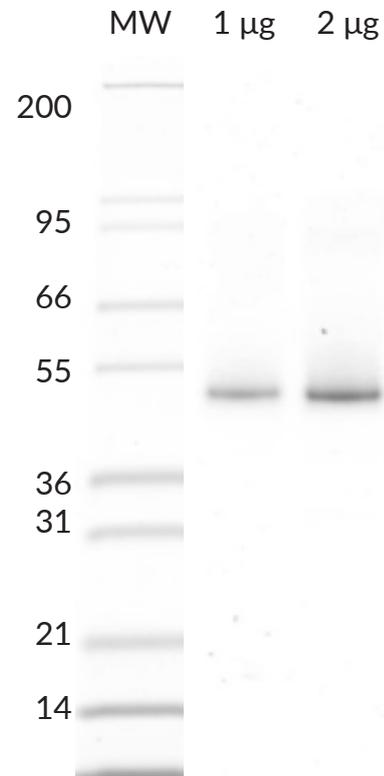
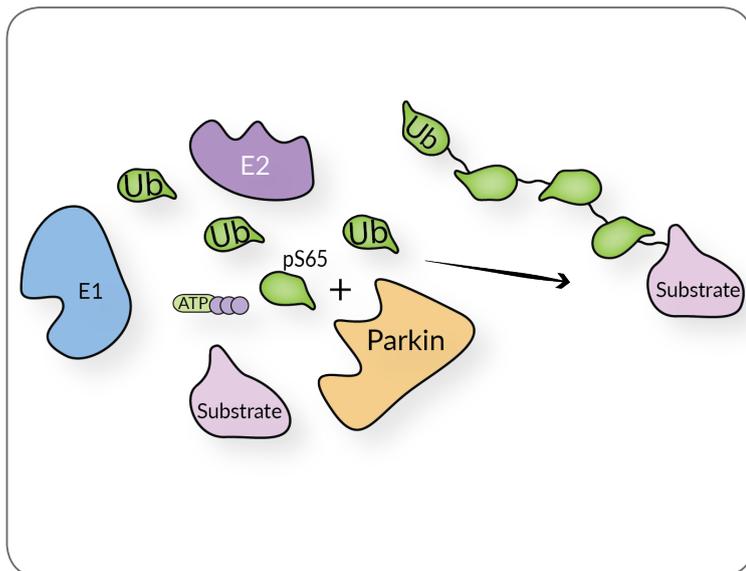
Purity: >95% by SDS-PAGE

Storage Buffer: 50mM Tris-HCl pH 8.0, 200 mM NaCl, 5mM TCEP, 10% Glycerol

Storage: -80C, Avoid multiple freeze / thaw

Usage: Working concentrations of this enzyme range from 1 to 5 µM.

Quality Control and Performance Data



His₆ - Parkin SDS-PAGE. From left to right, increasing amounts of His₆ - Parkin were loaded onto a 4-20% SDS-PAGE gel and stained with coomassie brilliant blue. Purity is > 95%.

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References

- 1) Bingol, B. *et al.* (2014) Nature 510: 370
- 2) Ordureau, A. *et al.* (2014) Mol. Cell 56: 360
- 3) Wauer T. *et al.* (2015) Nature 524: 370

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