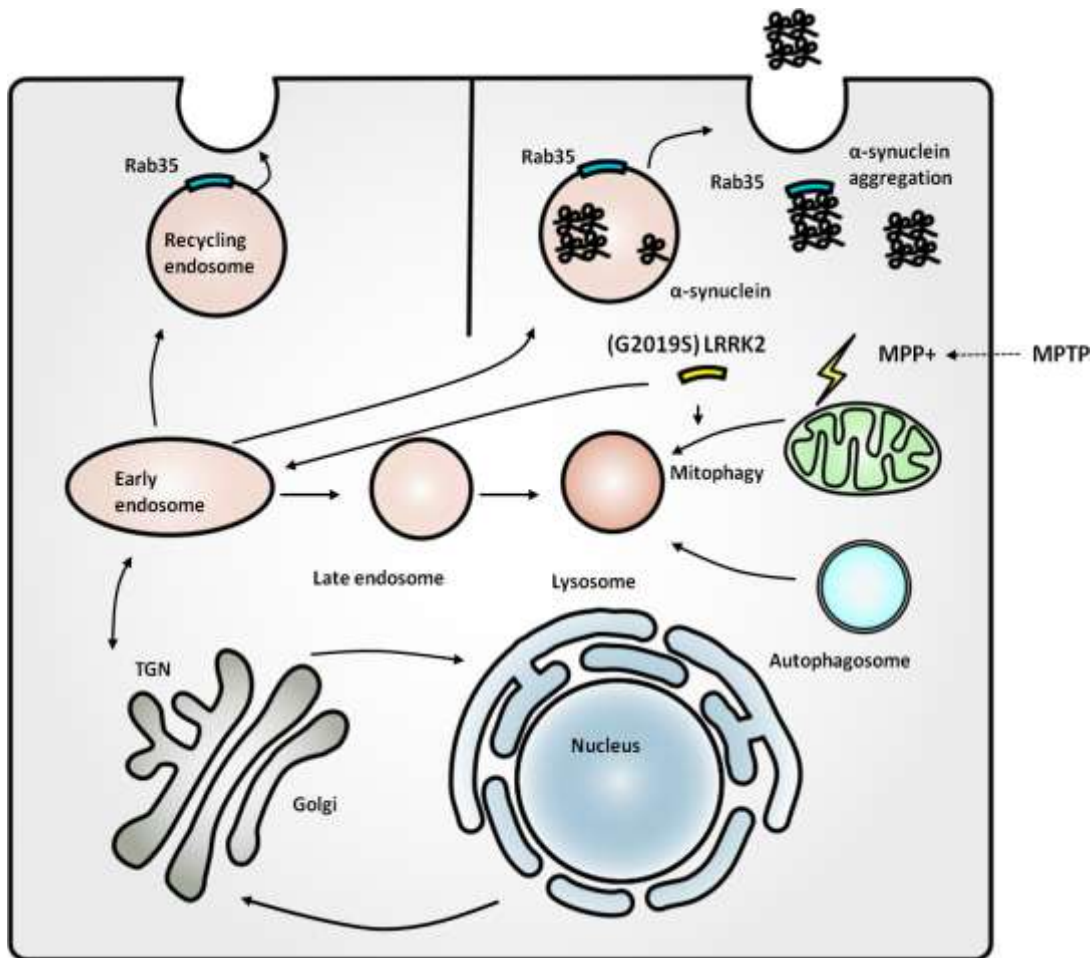
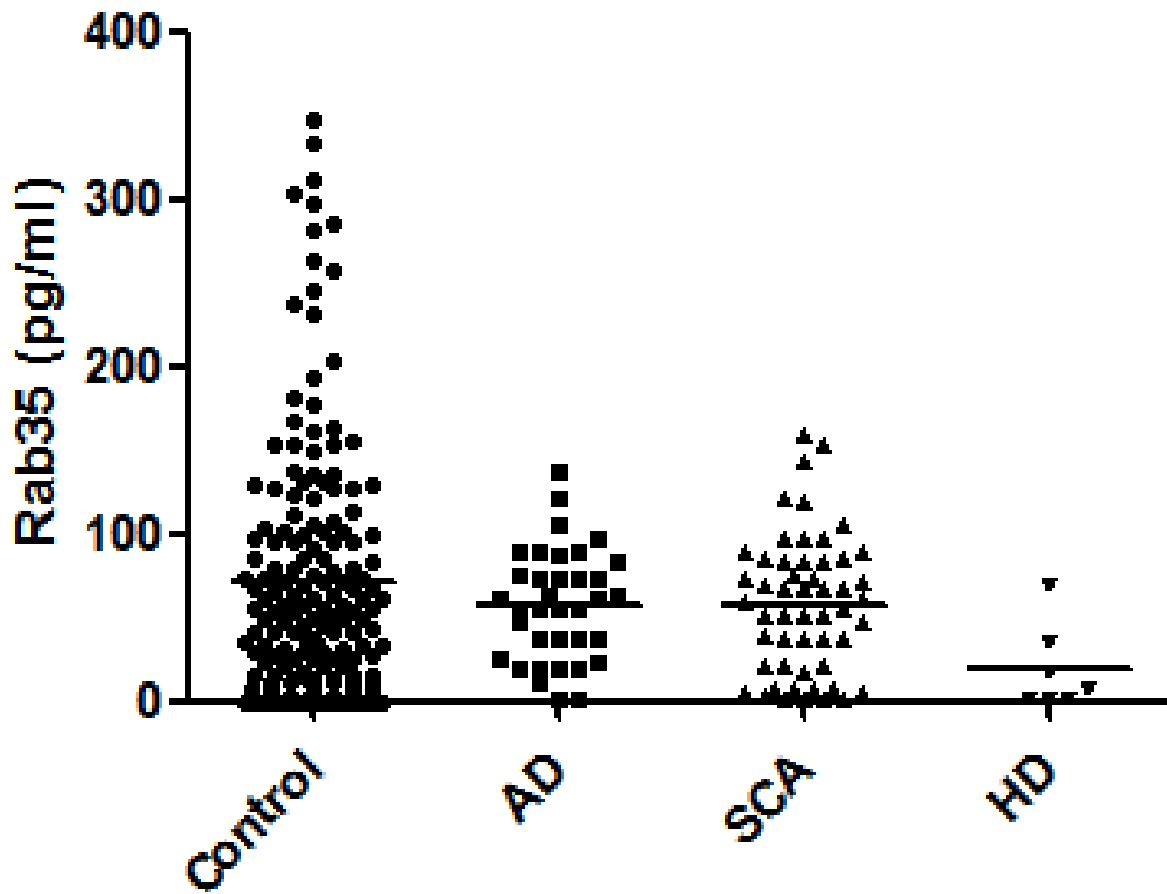


## Increased Rab35 expression is a potential biomarker and implicated in the pathogenesis of Parkinson's disease

### Supplementary Material



**Supplemental Figure 1: Illustration of the possible mechanism underlying the role of Rab35 in pathogenesis of PD.** Left panel: under a normal condition, Rab35 is localized in recycling endosome trafficking to the cell surface. Right panel: under the PD condition, the dysfunction of protein degradation results in the sequestration of abnormal proteins in Rab35 localized endosome. Overexpression of Rab35 promotes the aggregation of  $\alpha$ -Syn and secretion of  $\alpha$ -Syn to the intercellular space.



**Supplemental Figure 2: The serum level of Rab35 is not significantly increased in patients with Alzheimer's disease (AD), spinocerebellar ataxia (SCA) or Huntington's disease (HD).** The dot plot shows the serum level of Rab35 in healthy control subjects (n=177), AD patients (n=36), SCA patients (n=53) or HD patients (n=7).

**Supplemental Table 1: Demographic data and Rab35 serum levels of patients and control subjects**

Group	Controls	PSP	MSA	PD	PD	
AAO					AAO $\leq$ 50	AAO>50
N	177	46	80	213	32	181
Gender (M / F)	99 / 88	25 / 21	35 / 45	107 / 106	17 / 15	90 / 91
Age (years)*	61.60 $\pm$ 0.94	61.98 $\pm$ 1.13	57.75 $\pm$ 0.9	62.12 $\pm$ 0.94	35.91 $\pm$ 1.54	66.75 $\pm$ 0.59
Serum Rab35 level (pg/ml)*	70.51 $\pm$ 5.72	71.22 $\pm$ 9.37	58.37 $\pm$ 8.22	131.30 $\pm$ 9.67	210.35 $\pm$ 28.29	117.32 $\pm$ 9.90

PSP, progressive supranuclear palsy; MSA, multiple system atrophy; PD, Parkinson's disease

\* Mean  $\pm$  SEM

**Supplemental Table 2: Identification of serum proteins differentially expressed between NC and PD.**

For Table S2, please see the attached Excel file