

Supplementary Figure 9. L444P GBA heterozygous mutation leads to autophagy abnormality. **a**, **b** Effect of rapamycin on GBA<sup>+/L444P</sup> expression. Primary cortical neurons were cultured from WT and GBA<sup>+/L444P</sup> mice. After 10 DIV, primary neurons were treated with 20 nM of rapamycin (mTOR inhibitor for inducing autophagy) for 24 h. **a** Representative Immunoblots of GBA. **b** GBA expression levels were normalized against β-actin and the error bars represent the mean  $\pm$  S.E.M (n = four per group). **c** Immunoblots of Autophagy marker proteins SQSTM1/p62, and LC3A/B-I/II. VMB lysates were immunoblotted with anti-SQSTM1/p62, and anti-LC3A/B-I/II antibodies. **d** SQSTM1/p62, and **e** LC3A/B-II expression levels were normalized against β-actin. Error bars represent the mean  $\pm$  S.E.M (n = four mice per group). Two-way ANOVA was used for statistical analysis followed by *post-hoc* Bonferroni test for multiple group comparison. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001. n.s: not significant.