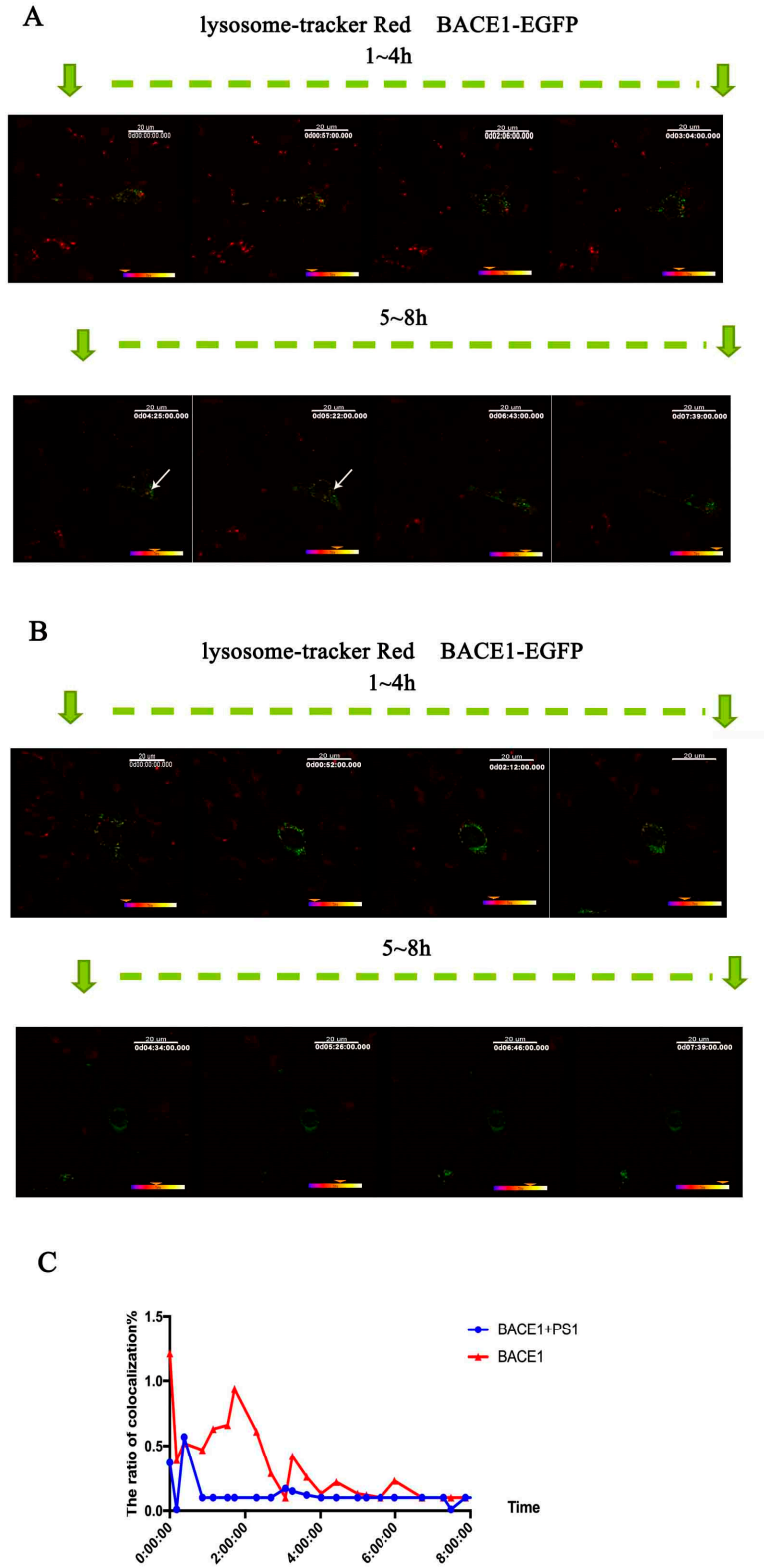


**Figure S1.** Western blot of lysates for 48 h transfected with pPS1-WT/pPS1-D257A/pPS1-S170F or without transfection in MEF PS1<sup>-/-</sup> cells. (A) The protein expression levels of PS1; (B) The protein expression levels of BACE1; Actin was used as reference; One-way ANOVA and Dunnett's post hoc test: \*\* $P < 0.01$ , \* $P < 0.05$ , (n = 3).



**Figure S2.** Time-lapse imaging of BACE1 and the lysosome tracker with or without PS1. (A) The distribution of BACE1-EGFP without PS1. (B) The distribution of BACE1-EGFP with PS1. (C) Quantitative analysis of the colocalization of BACE1-EGFP and the lysosome tracker with and without PS1.