

Fig. S1. The C-terminal domain of EFA6 is responsible for  $\beta$ -arrestin interaction. GST pull-down of purified His-tagged C-terminal domain of  $\beta$ -arrestin1 (1  $\mu$ M) with different constructs of EFA6 fused to GST protein (2  $\mu$ M).

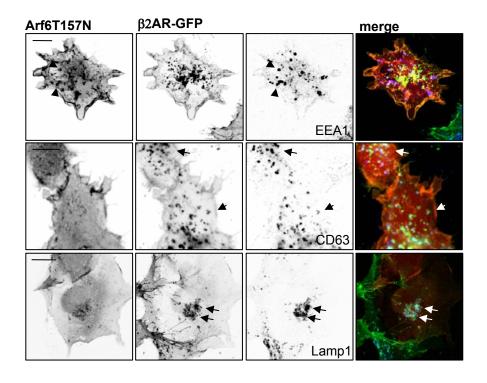


Fig. S2. Activated Arf6 induces the accumulation of the  $\beta$ 2AR into the degradative pathway. HEK293 cells stably expressing  $\beta$ 2AR-GFP were transiently transfected with plasmid encoding mcherry-tagged Arf6T157N. After 24 h, cells were fixed and stained with anti-EEA1 (as a marker for early endosomes), anti-CD63 (as a marker for both late endosomes and lysosomes) and anti-Lamp2 (as a marker for lysosomes) antibodies. Scale bars, 10  $\mu$ m.

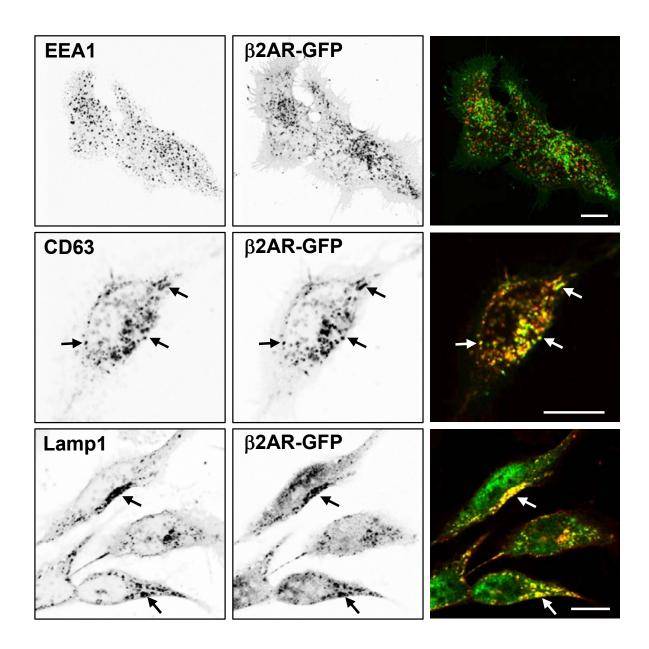


Fig. S3. Prolonged isoproterenol treatment induces the accumulation of  $\beta 2AR$  into the degradative pathway. HEK293 cells stably expressing  $\beta 2AR$ -GFP were treated with isoproterenol for 3h. Cells were fixed and stained with anti-EEA1 (as a marker for early endosomes), anti-CD63 (as a marker for both late endosomes and lysosomes) and anti-Lamp2 (as a marker for lysosomes) antibodies. Scale bars,  $10 \ \mu m$ .