Figure S1. Normal retinal cell size in flies with overexpression of Rheb by the ninaE promoter. (A–C) Scanning electron micrographs of compound eyes. Control (GMR-Gal4/++; A), GMR>rheb (B), and ninaE>rheb (C) flies are shown. Bar, 100 µm.
Figure S2. **Expression of MYC-tagged Atg1 and increase of autophagy without affecting S6K phosphorylation in ninaE-atg1 retinas.**

(A) Detection of MYC-tagged Atg1 in Western blot using head extracts. (B) S6K phosphorylation levels were unchanged by overexpression of Atg1 in the adult photoreceptor cells. Protein extracts from dissected retina tissues were immunoblotted with the indicated antibodies. (A and B) Molecular mass is indicated in kilodaltons.

(C) Examination of autophagy by LysoTracker staining. To mark the rhabdomere of photoreceptor cells, flies were crossed with ninaE-Rh1GFP (green). Ommatidia were dissociated and stained with LysoTracker (red). Bar, 10 µm.
Overexpression of TSC1/2 or Atg1 does not suppress the retinal degeneration in NinaE<sup>RH27</sup> flies. (A–F) Retinal morphology of 25-d-old flies under light/dark cycle examined by transmission EM. Wild type (A), GMR>Tsc1/2 (B), ninaE-atg1 (C), NinaE<sup>RH27</sup> (D), NinaE<sup>RH27</sup>/GMR>Tsc1/2 (E), and NinaE<sup>RH27</sup>/ninaE-atg1 (F) are shown. Bar, 2 µm.