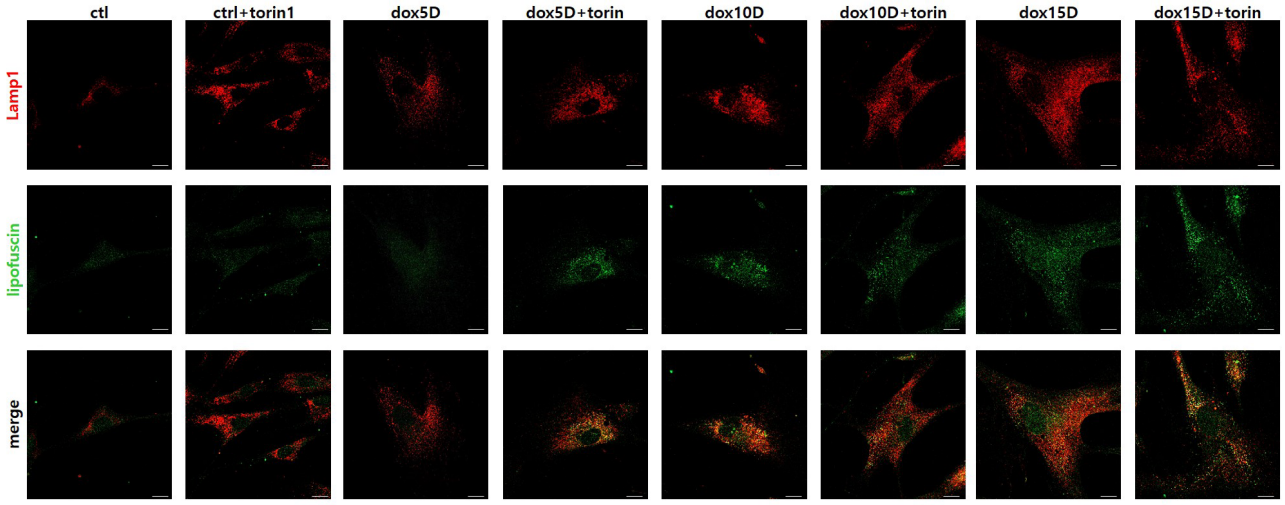
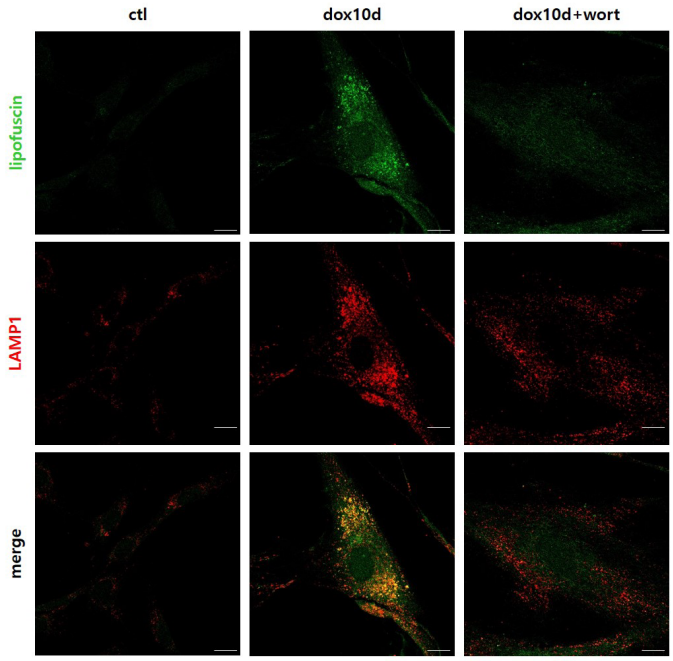
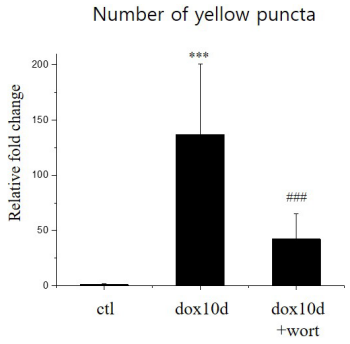


Supplemental Fig. 1. Granular change of cytosolic lipofuscin fluorescence during prolonged chase after doxorubicin chase. Fibroblasts either mock treated or chased for 5, 10, or 15 days after doxorubicin pulse were treated with Torin-1 for 4 h prior to application for confocal microscopic examination for autofluorescence and lysosomes (LTR). Upon Torin-1 treatment, the number of yellow puncta, which are likely the lipofuscin-containing autolysosomes, increased (dox5D+torin). However, in the control cells, the treatment barely induced formation of yellow puncta (ctl+torin). In addition, in the cells chased for 10 or 15 days, where yellow puncta were already present abundantly, Torin-1 treatment did not alter their levels (dox10D+torin and dox15D+torin).





Supplemental Fig. 2. Attenuation of lipofuscin granule accumulation through an inhibition of autophagy activation. Fibroblasts were chased for 10 days after doxorubicin pulse (dox10d) or chased in the presence of 0.2 μM Wortmannin throughout the chase period (dox10d+wort). Cells were applied to confocal microscopic examination for lipofuscin autofluorescence and lysosomes (LAMP1). Upon Wortmannin treatment, the acuumulation of yellow puncta, which are likely the lipofuscin-containing autolysosomes, was substantially attenuated. The numbers of lipofuscin granules with the size over 0.5 μm^2 in 10 cells from each population was averaged, and mean values were plotted in the bar graph. (***$p < 0.001$, ###$p<0.001$ by ANOVA, the significance of the difference from the untreated cells (ctl), and of the difference from of 'dox10d).