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Figure S1

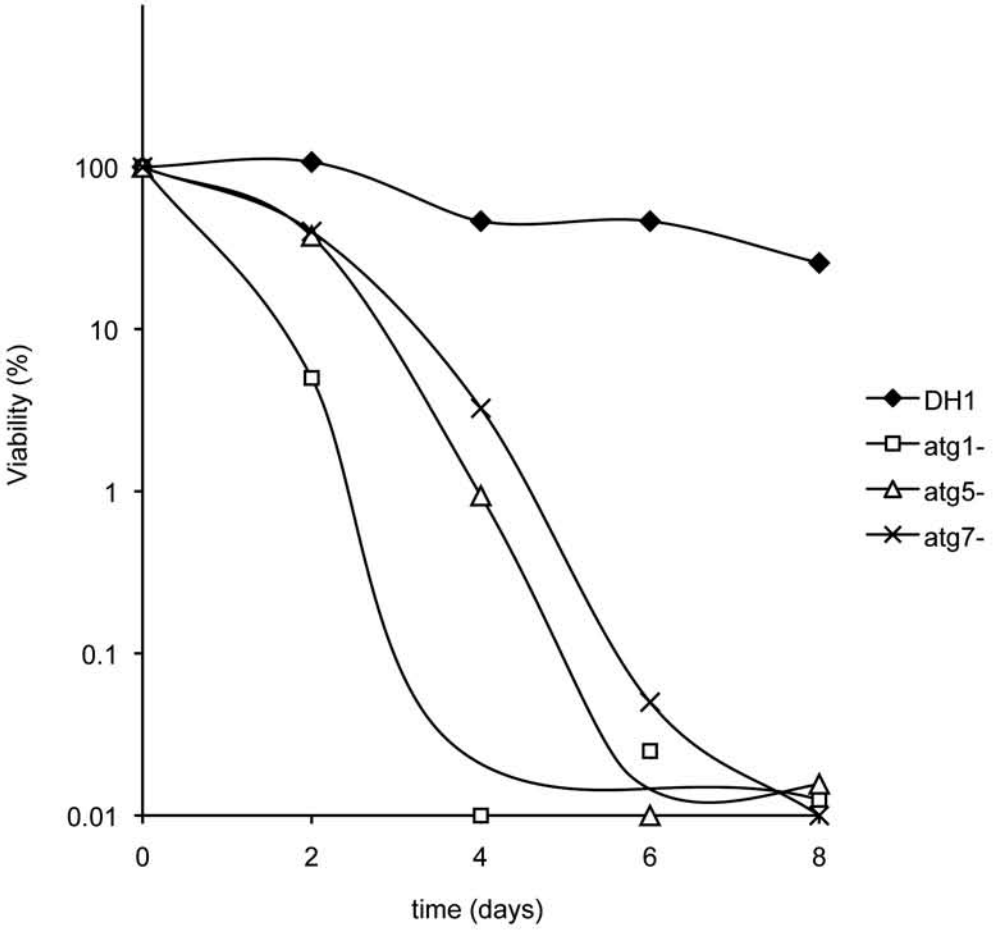

Figure S1. Autophagy is essential for the survival of arginine and lysine starvation.
Cells were incubated in SIH medium lacking arginine and lysine and viability measured by the ability of the cells to produce colonies on bacterial lawns at each time point. A representative data set is shown from at least 3 independent experiments.

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Figure S2

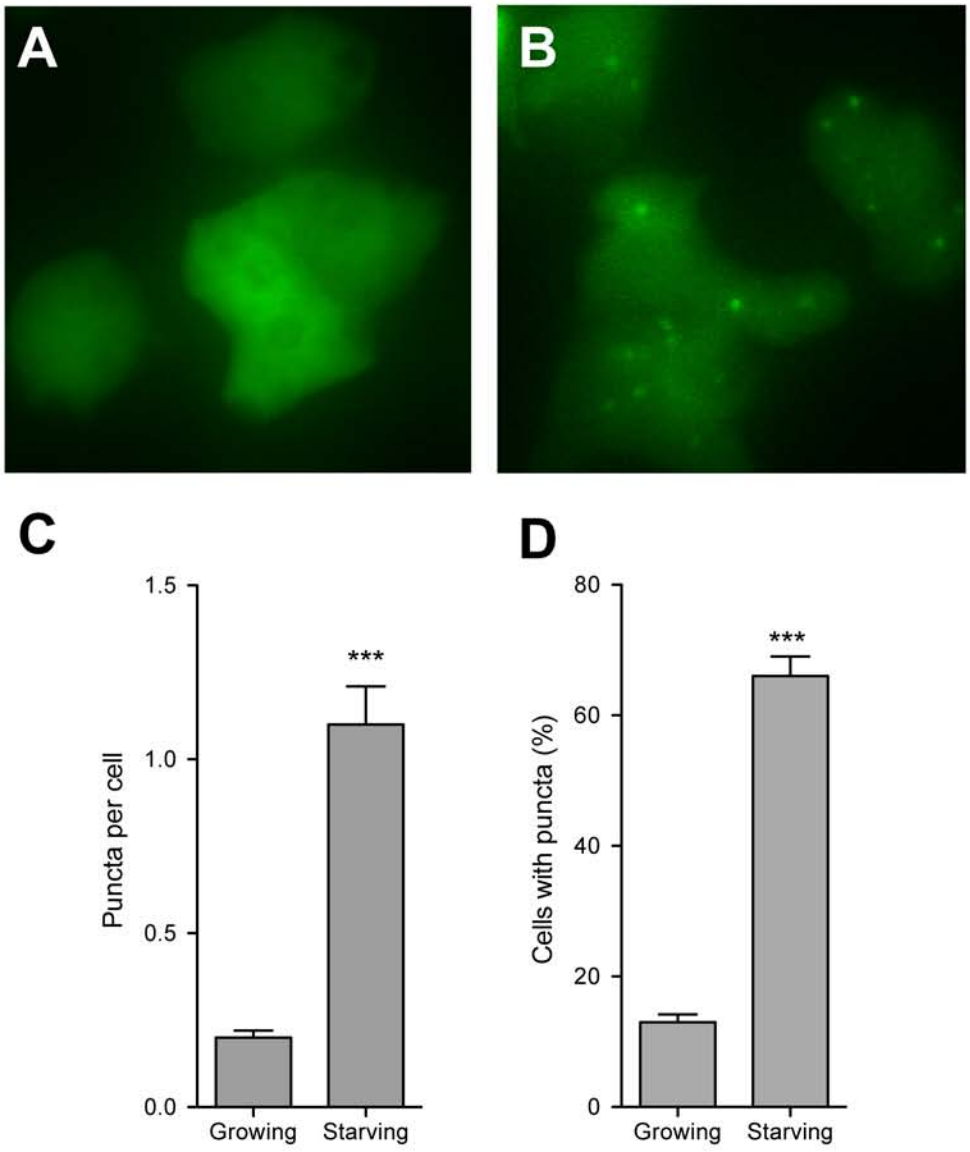

Figure S2. GFP-atg18 puncta are induced upon starvation.
Images of wild-type (Ax3) cells expressing GFP-atg18 grown in either (A) full medium or (B) medium lacking arginine and lysine for 30 minutes (B). Arrows in (B) indicate puncta. This was quantified and is shown both as the mean number of puncta per cell (C) and the percentage of cells with more than one puncta (D). Values plotted are the means ± standard deviation of 3 independent experiments. (*** P<0.001, Student's T-test)

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Figure S3

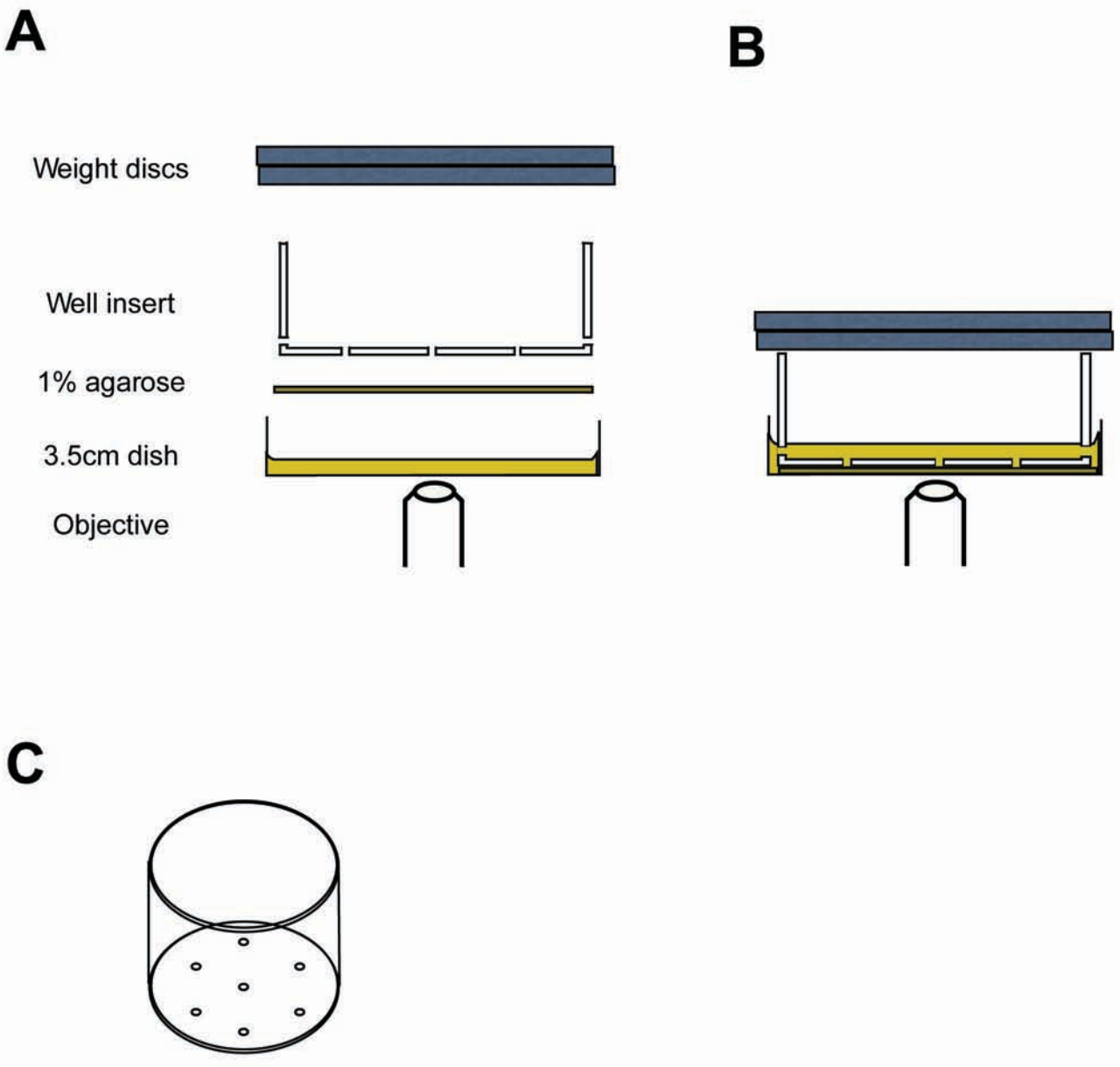

Figure S3. The experimental set up used to exert compressive loads upon cells.
The arrangement of the components is shown in both (A) expanded and (B) assembled views.
(C) Shows a schematic view of the well insert used.

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Figure S4

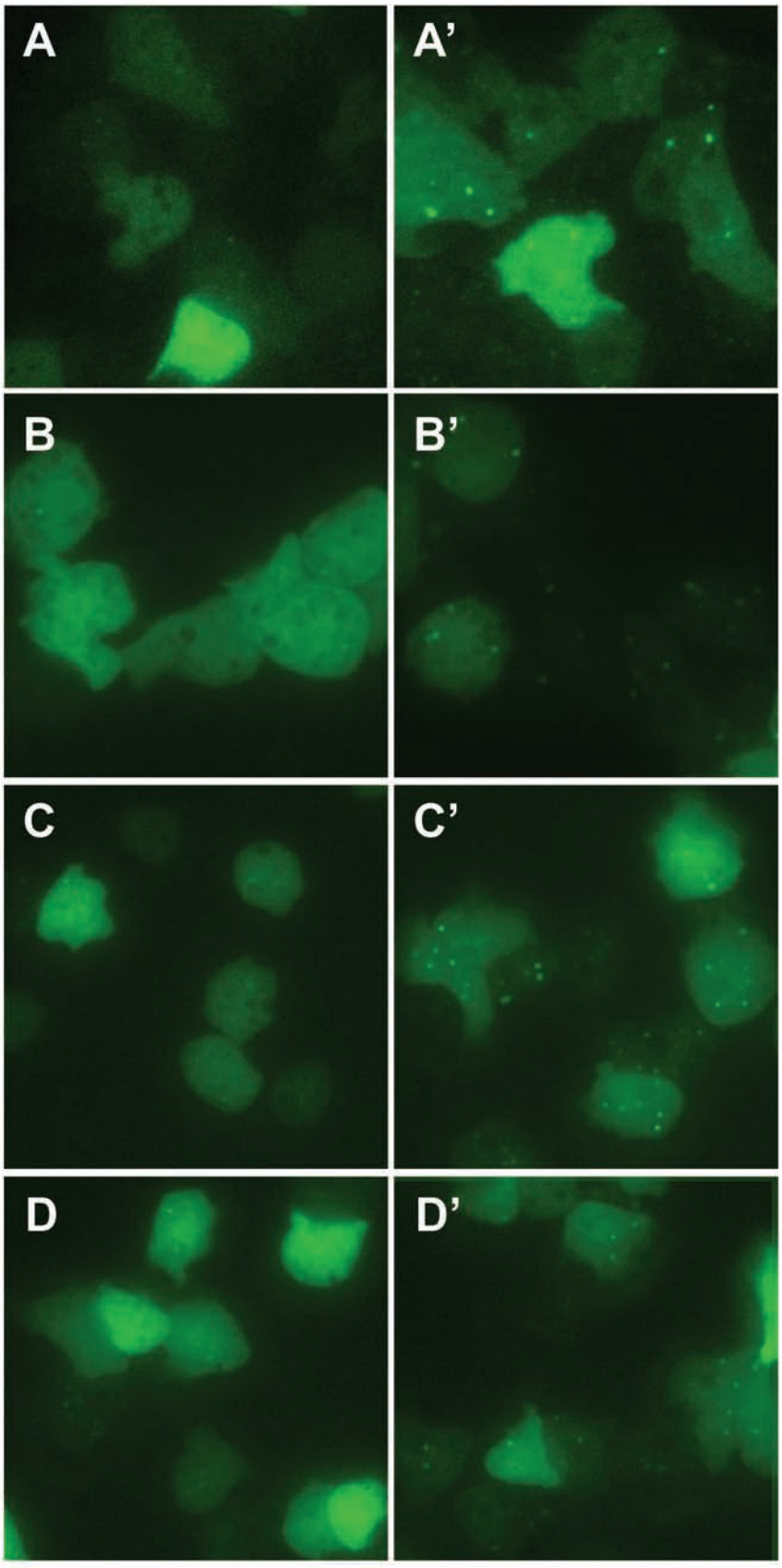

Figure S4. The induction of autophagy by mechanical stress in the absence of (A and A') gβ, (B and B') PKCcat, (C and C') pkbA, and (D and D') pkbR1. Mutant Dictyostelium strains expressing GFP-atg8 were compressed with 1.15 kPa. Images were shown at both 0 (A to D) and 10 minutes (A' to D').

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Figure S5

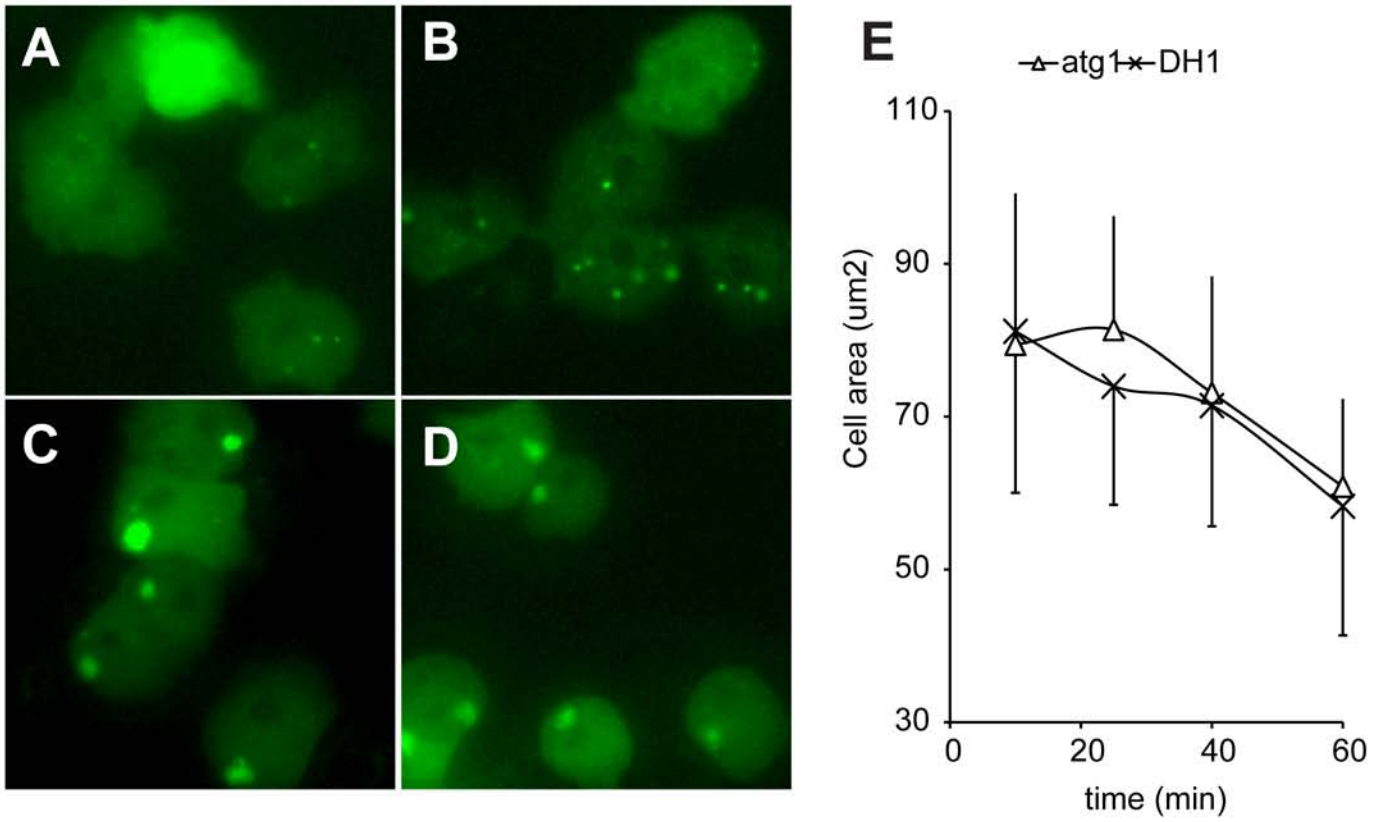

Figure S5. Cytoskeletal adaptation in autophagy-deficient cells. DH1 (A and B) and atg1-null (C and D) cells were compressed under 0.2kPa. Representative images of cells after 10 (A and C) and 60 minutes (B and D) are shown. Quantification of the mean cross-sectional area of the at least 50 cells at each time point is shown in (E).