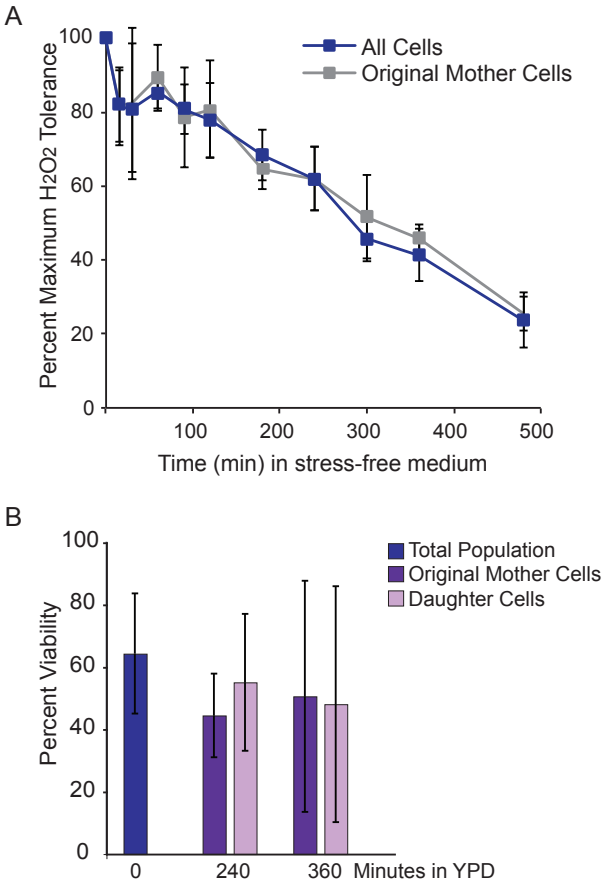

Figure S2 Daughter cells inherent acquired stress resistance. Resistance to 1mM H_2O_2 was scored in UCC8613 cells exposed to 0.7M NaCl for 60 min then returned to YPD with 1 µM estradiol to mark daughter cells as adenine auxotrophs (ade-). In this strain, the adenine biosynthesis gene *ADE2* is flanked by LoxP sites, while an estradiol-activated CRE recombinase is expressed via the bud-specific transcription factor Ace2p. Upon addition of estradiol, the bud-specific recombinase excises *ADE2* only in daughter cells. This renders daughter cells permanently auxotrophic for adenine (ade^-), a phenotype that can be conveniently distinguished by the red coloration of ade^- cells. Estradiol-treatment rendered more than 80% of daughter cells ade^-, while less than 3% of cells spontaneously lost *ADE2* in the absence of estradiol. (A) Cells were exposed to NaCl for 60 min and then resuspended in fresh YPD medium; 1 µM estradiol was added either immediately or after ~2 generations in stress-free medium (at which point we estimate ~75% of cells had never directly experienced NaCl). Cell viability was scored by plating cells on YPD to measure all cells (blue curve), or on SC-adenine to measure mother cells (grey curve). (B) Cell viability was also scored from YPD plates by counting red (ade-) colonies arising from daughter cells and white (ade+) colonies generated by mother cells. Data represent the average and standard deviation of at least biological triplicates. Results were indistinguishable if estradiol was added immediately after cell transfer to YPD or after 2 generations of YPD growth (data not shown).