

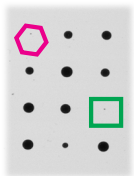
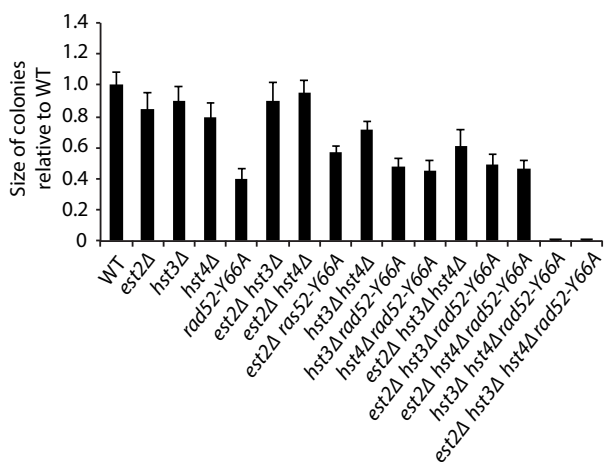



A


 *hst3Δ hst4Δ rad52-Y66A*

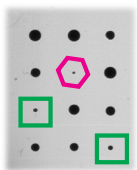
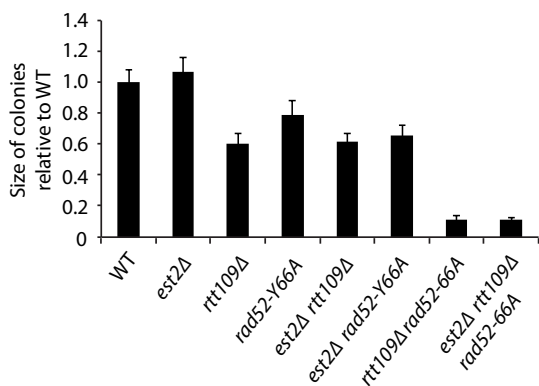
 *est2Δ hst3Δ hst4Δ rad52-Y66A*

Genotype	Size of colonies relative to WT
WT	1.0
<i>est2Δ</i>	~0.85
<i>hst3Δ</i>	~0.85
<i>hst4Δ</i>	~0.8
<i>rad52-Y66A</i>	~0.4
<i>est2Δ hst3Δ</i>	~0.85
<i>est2Δ hst4Δ</i>	~0.9
<i>est2Δ rad52-Y66A</i>	~0.55
<i>hst3Δ hst4Δ</i>	~0.7
<i>hst3Δ rad52-Y66A</i>	~0.45
<i>hst4Δ rad52-Y66A</i>	~0.4
<i>est2Δ hst3Δ hst4Δ</i>	~0.55
<i>est2Δ hst3Δ rad52-Y66A</i>	~0.45
<i>est2Δ hst4Δ rad52-Y66A</i>	~0.45
<i>hst3Δ hst4Δ rad52-Y66A</i>	~0.45
<i>est2Δ hst3Δ hst4Δ rad52-Y66A</i>	~0.05

 *rtt109Δ rad52-Y66A*

 *est2Δ rtt109Δ rad52-Y66A*

Genotype	Size of colonies relative to WT
WT	1.0
<i>est2Δ</i>	~1.05
<i>rtt109Δ</i>	~0.6
<i>rad52-Y66A</i>	~0.75
<i>est2Δ rtt109Δ</i>	~0.6
<i>est2Δ rad52-Y66A</i>	~0.65
<i>rtt109Δ rad52-Y66A</i>	~0.15
<i>est2Δ rtt109Δ rad52-Y66A</i>	~0.15

B

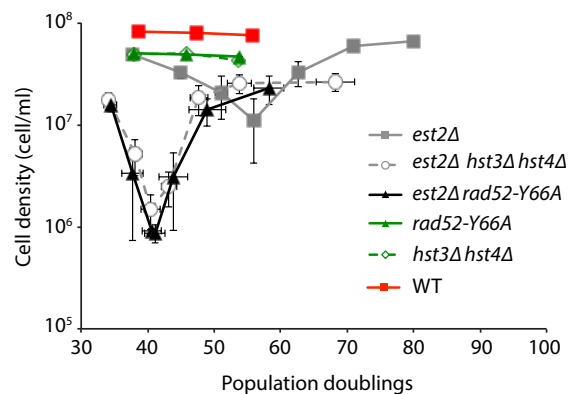
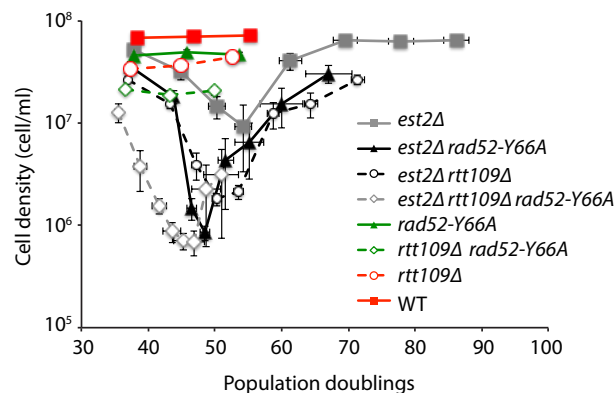



Figure S5. Hyper- and hypo-acetylation of H3K56 causes synthetic lethality and sickness, respectively, with *rad52-Y66A*. (A) Representative tetrads derived from the sporulation of CCY136 and CCY143 are shown. Colony sizes were measured for each genotype and normalized to wild type. Mean \pm SE is shown. (B) Graphs are identical to the ones shown in Figure 5, except that telomerase-positive control strains have been included (2 to 4 isolates each).