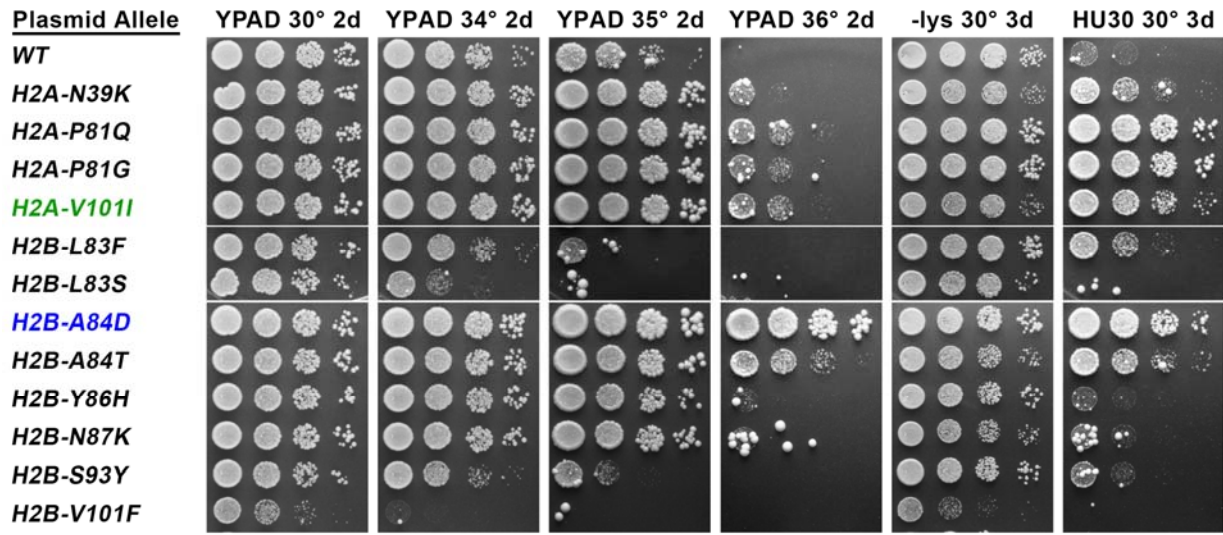


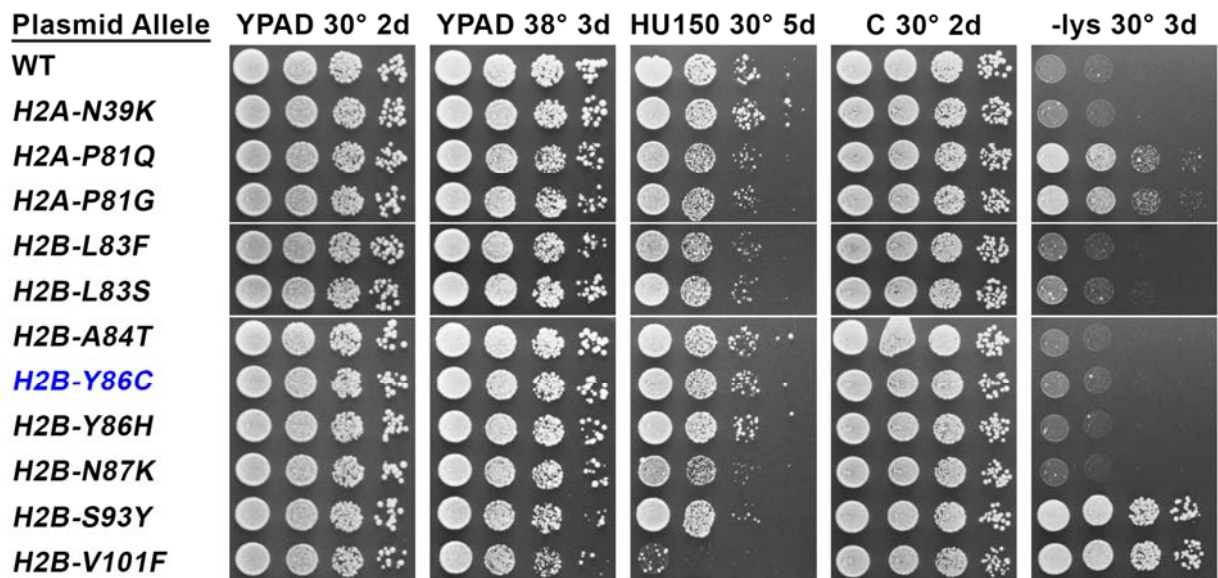
A

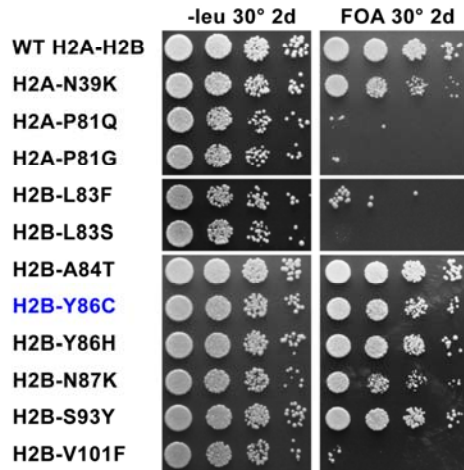
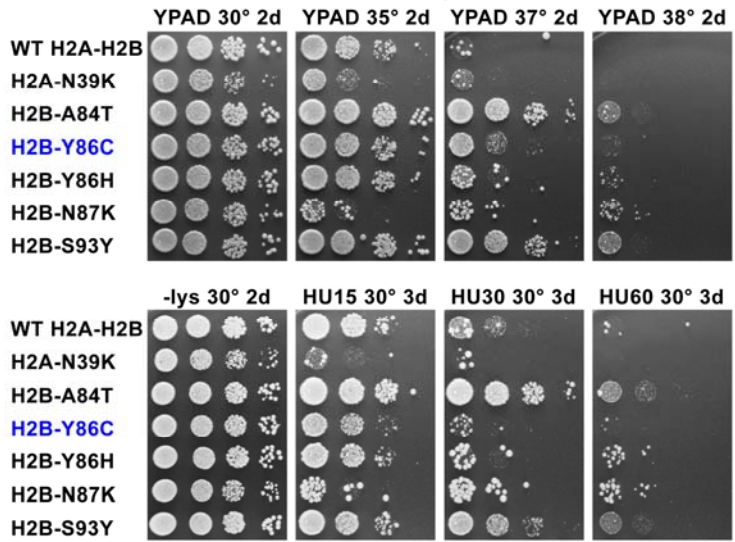
spt16-11 histone deletion strain



B

WT histone deletion strain



C*pob3-Q308K* histone deletion strain; viability test*pob3-Q308K* histone deletion strain; phenotypes of viable combinations**Figure S1**

Effects of *spt6-F249K* suppressors in FACT mutants or a WT strain. Tests were conducted as in Fig 1. A) Strain 9029-3-2 pTF237 (*spt16-11* with histone deletions) was transformed with plasmids carrying suppressors of *spt6-F249K* to test for overlap between the two sets of suppressors. B) Strain 9028-6-1 pTF237 (WT with histone deletions) was tested as above to determine the effects of histone mutations in an otherwise normal strain. C) Strain 9028-1-4 pTF237 (*pob3-Q308K* with histone deletions) was tested with the *spt6-F249K* suppressor plasmids and tested as above. Only a subset of the plasmids was able to support growth of the *pob3-Q308K* strain, with others failing to grow on medium containing FOA, indicating inability to lose the WT histone plasmid pTF237 (left panel). Strains that survived this selection were tested for phenotypes as above (right panel).

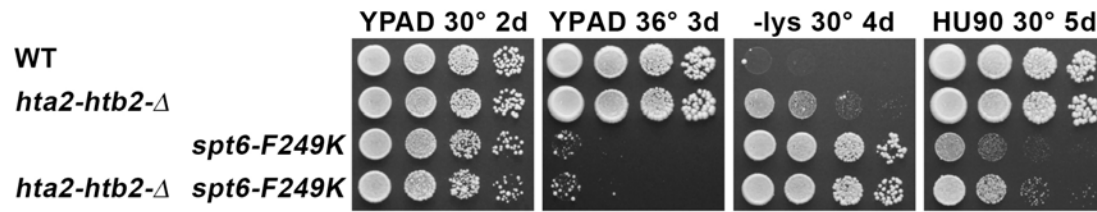


Figure S2

Deletion of *HTA2-HTB2* has mild effects on an *spt6-F249K* strain. Strains with the relevant genotypes listed (Table 1) were tested for phenotypes as in Fig 1.

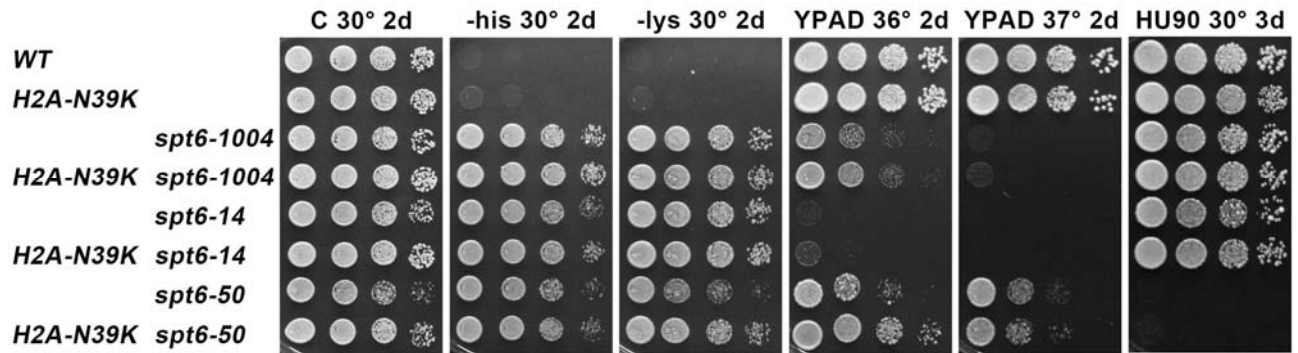


Figure S3

H2A-N39K has minor effects on other alleles of *spt6*. Mutations affecting the central core (*spt6-1004* and *spt6-14*) or C-terminal domain (*spt6-50*) of Spt6 do not show the strong suppression of phenotypes by *hta1-N39K hta2-N39K* that was observed with *spt6-F249K*. Each allele caused a strong Spt⁻ phenotype detected as His⁺ and Lys⁺ phenotypes with these strains that carry both *his4-912 θ* and *lys2-128 θ* reporters (Table 1). Neither this nor other phenotypes associated with these alleles were strongly suppressed by H2A-N39K.