

Table S1: Yeast strains used in this study

Strain	Parent	Genotype	Source
DG154	BY4741	<i>MATa his3Δ leu2Δ met15Δ ura3Δ gcn5Δ::kanMX4 esa1L254P</i>	(Ginsburg et al., 2009)
F729	BY4741	<i>MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0</i>	(Qiu et al., 2009)
WT HDACs	BY 4705	<i>MATa ade2Δ::hisG HIS3Δ200 LEU2Δ0 ura3Δ0 trp1Δ63 LYS2Δ0 met15Δ0</i>	(Sharma et al., 2007)
<i>hos2Δ/rpd3Δ</i>	BY 4705	<i>MATa ade2Δ::hisG HIS3Δ200 LEU2Δ0 ura3Δ0 trp1Δ63 LYS2Δ0 met15Δ0 rpd3::LEU2hos2::LYS2</i>	(Sharma et al., 2007)
FH62(WT H3)	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-HHFS]-URA3</i>	Thermo Scientific
FH63(WT H4)	S288C	<i>MATa his3_200 leu2_0 lys2_0 trp1_63 ura3_0 met15_0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-HHFS]-URA3</i>	Thermo Scientific
FH59(Δ1-28 H3)	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[hhts (Δ1-28)-HHFS]-URA3</i>	Thermo Scientific
FH58(Δ1-2 H3)	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[hhts (Δ1-20)-HHFS]-URA3</i>	Thermo Scientific
FH60 (Δ1-16 H4)	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-hhfs (Δ1-16)]-URA3</i>	Thermo Scientific
FH46((H3 K4, K9, K14, K18-A)	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2:: [hhts K4,9,14,18A-HHFS]-URA3</i>	Thermo Scientific
FH47	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-hhfs K5,8,12,16R]-URA3 SPT16-13myc::TRP1</i>	Thermo Scientific

FH48	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-hhfs K5,8,12,16Q]-URA3 SPT16-13myc::TRP1</i>	Thermo Scientific
SPT16-TET	R1158	<i>pSPT16::kanR-tet07-TATA URA3::CMV-tTA MATa his3Δ1 leu2Δ0 met15Δ0</i>	Thermo Scientific
SPT6-TET	R1158	<i>pSPT6::kanR-tet07-TATA URA3::CMV-tTA MATa his3Δ1 leu2Δ0 met15Δ0</i>	Thermo Scientific
RP4	BY 4741	<i>MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 SPT16-13myc::HIS3</i>	This Study
RP6	1257	<i>MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 set1Δ::hphMX4 set2Δ::kanMX4 SPT16-13myc::HIS3</i>	This Study
RP8	BY 4705	<i>MATa ade2Δ::hisG HIS3Δ200 LEU2Δ0 ura3Δ0 trp1Δ63 LYS2Δ0 met15Δ0 SPT16-13myc::HIS3</i>	This Study
RP9	BY 4705	<i>MATa ade2Δ::hisG HIS3Δ200 LEU2Δ0 ura3Δ0 trp1Δ63 LYS2Δ0 met15Δ0 rpd3::LEU2hos2::LYS2 SPT16-13myc::HIS3</i>	This Study
RP10	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-HHFS]-URA3 SPT16-13myc::TRP1</i>	This Study
RP11	S288C	<i>MATa his3_200 leu2_0 lys2_0 trp1_63 ura3_0 met15_0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-HHFS]-URA3, SPT16-3myc::TRP1</i>	This Study
RP12	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[hhts (Δ1-28)-HHFS]-URA3 SPT16-13myc::TRP1</i>	This Study
RP13	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[hhts (Δ1-20)-HHFS]-URA3 SPT16-13myc::TRP1</i>	This Study
RP14	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-hhfs(Δ1-16)]-URA3SPT16-13myc::TRP1</i>	This Study

RP15	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2:: [hhts K4,9,14,18A-HHFS]-URA3 SPT16-13myc::TRP1</i>	This Study
RP16	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-hhfs K5,8,12,16R]-URA3 SPT16-13myc::TRP1</i>	This Study
RP17	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-hhfs K5,8,12,16Q]-URA3 SPT16-13myc::TRP1</i>	This Study
RP18	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[HHTS-HHFS]-URA3 H2B-HA::TRP1</i>	This Study
RP19	S288C	<i>MATa his3Δ200 leu2Δ0 lys2Δ0 trp1Δ63 ura3Δ0 met15Δ0 can1::MFA1pr-HIS3 hht1-hhf1::NatMX4 hht2-hhf2::[hhts (Δ1-28)-HHFS]-URA3 H2B-HA::TRP1</i>	This Study
RP20	DG154	<i>MATa his3Δ leu2Δ met15Δ ura3Δ gcn5Δ::kanMX4 esa1L254P SPT116-myc13::HIS3</i>	This Study
RP21	R1158	<i>pSPT16::kanR-tet07-TATA URA3::CMV-tTA MATa his3Δ1 leu2Δ0 met15Δ0 SPT6Δ202::HIS3</i>	This Study