Table 1: McDaniel et al.

Table 1. Strains Used in this Study			
Name	**Description**	**Genotype**	**Reference**
YSM080	Δrco1	MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 Rco1Δ::KanMX	This study
KLY78	WT Flo8 Cryptic Reporter Strain	MATα, ura3-52, leu2Δ1, trp1Δ63, his3Δ200, lys2-128δ, KanMX4::GAL1pr-flo8::HIS3 (flo8Δ (+1729-2505)::HIS3 (+1-663))	Silva et al. 2012
YSM127	KLY78, Rco1Δ	MATα, ura3-52, leu2Δ1, trp1Δ63, his3Δ200, lys2-128δ, KanMX4::GAL1pr-flo8::HIS3 (flo8Δ (+1729-2505)::HIS3 (+1-663)) *rco1 Δ::Nat*	This study
BY4741	WT	MATa his3Δ1 leuΔ0 met15Δ0 ura3Δ0	
YSB787	Bur1 Shuffle	*MATa ura3-52 leu2Δ1 trp1Δ63 his3Δ200 bur1 Δ::HIS3 lys2Δ202 [pRS316-BUR1]*	Keogh et al., 2003.
YSB1849	Bur1 Shuffle rco1Δ	*MATa bur1Δ::HIS3 rco1Δ::KanMX ura3-52 leu2Δ1 trp1Δ63 his3Δ200 lys2Δ202 [pRS316-BUR1]*	Keogh et al., 2005.
YSB1003	Bur1 Shuffle set2Δ	*MATα, bur1Δ::HIS3, set2Δ::KanMX, ura3-52 or 3Δ0, leu2Δ1 or 2Δ0, trp1Δ63, his3Δ200 or 3Δ1, lys2Δ202 (pRS316-BUR1)*	Keogh et al., 2005.
YCR239	*STE11-HIS3* reporter strain, *rco1 Δ*	MATa, his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 RCO1Δ::KANMX6 STE11-1870::HIS3	Ruan 2015

Table 2: McDaniel et al.

Table S2: Plasmids Used in This Study		
Name	**Features**	**Source**
pRS415	Empty Vector	
pRS415-Rco1	Rco1-3XHA	This study
pRS415-Rco1-C275A	Rco1-C275A-3XHA	This study
pRS415-Rco1-D276A	Rco1-D276A-3XHA	This study
pRS415-Rco1-H283A	Rco1-H283A-3XHA	This study
pRS415-Rco1-C417A	Rco1-C417A-3XHA	This study
pRS415-Rco1-M438W	Rco1-M438W-3XHA	This study
pRS415-Rco1-C440A	Rco1-C440A-3XHA	This study
pRS415-Rco1-D441A	Rco1-D441A-3XHA	This study
pBL1253	pRS415 Rco1pro Flag-Rco1WT	Ruan et al., 2015
pCR864	pRS415-Rco1pro-Flag-Rco1phd2Δ	This study
pCR863	pRS415-Rco1pro-Flag-Rco1-C417A	This study
pBL451	pRET-GST-Rco1-PHD1	This study
Rco1-PHD2	pGEXT4T1-Rco1-PHD2	This study

Table 3: McDaniel et al.

Table 3. Histone peptides used in this study		
Tag	**Name**	**Sequence**
Biotin	H3 (1-20)	AR^{2}TK^{4}QTAR^{8}K^{9}S^{10}TGGK^{14}APRK^{18}QL-K(Biot)-NH_2
Biotin	H3 (1-20) H3K4me3	ARTK(Me$_3$)QTARKSTGGKAPRKQL-K(Biot)-NH_2
Biotin	H3(27-45)	KSAPSTGGVKKPHRYKPGT-GG-K(Biot)-NH_2
Biotin	H3(27-45) H3K36me2	KSAPSTGGVK(Me$_2$)KPHRYKPGT-GG-K(Biot)-NH_2
Biotin	H3(27-45) H3K36me3	KSAPSTGGVK(Me$_3$)KPHRYKPGT-G-K(Biot)-NH_2