

Table S2. Binding site PWM models not considered in our study. These PWMs were excluded because they were almost identical to the PWMs listed in the ‘Equivalent’ column, shown in Table S1. Letters in parentheses after TF names indicate the study from which we took the PWM data: B, Badis *et al.* (2008); H, Harbison *et al.* (2004); M, MacIsaac *et al.* (2006); Zhu *et al.* (2009).

TF (Study)	Equivalent
ACE2 (H)	SWI5 (B)
ADR1 (B)	YPR022C (B)
ADR1 (M)	ADR1 (H)
CBF1 (H)	TYE7 (B)
CIN5 (B)	YAP6 (Z)
CUP9 (Z)	CUP9 (B)
DAL80 (H)	GLN3 (B)
DAL80 (M)	GLN3 (B)
DAL81 (M)	DAL81 (H)
DIG1 (H)	STE12 (B)
EDS1 (B)	RGT1 (Z)
FHL1 (B)	FHL1 (Z)
FHL1 (H)	RAP1 (B)
FHL1 (M)	RAP1 (B)
FKH1 (H)	FKH2 (Z)
FKH1 (M)	FKH2 (Z)
FKH1 (Z)	FKH2 (Z)
FKH2 (M)	FKH2 (H)
GAL80 (H)	GAL4 (H)
GAL80 (M)	GAL4 (H)
GAT1 (B)	GZF3 (Z)
GAT1 (M)	GAT1 (H)
GAT3 (Z)	SRD1 (Z)
GAT4 (B)	ECM23 (B)
GCN4 (H)	GCN4 (Z)
GZF3 (B)	DAL80 (B)
GZF3 (M)	GZF3 (H)
HAL9 (Z)	YLL054C (Z)
HAP1 (B)	YKL222C (Z)

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TF (Study)	Equivalent
HAP3 (H)	HAP2 (H)
HAP3 (M)	HAP2 (H)
HAP5 (H)	HAP2 (H)
HAP5 (M)	HAP2 (H)
HSF1 (M)	HSF1 (H)
INO4 (M)	INO4 (H)
LEU3 (M)	LEU3 (H)
MBP1 (M)	MBP1 (H)
MCM1 (M)	NDD1 (H)
MET32 (H)	MET31 (H)
MIG2 (B)	MIG1 (B)
MIG3 (B)	MIG1 (B)
MIG3 (Z)	YML081W (Z)
MOT3 (M)	MOT3 (H)
MSN4 (B)	MSN2 (B)
MSN4 (M)	MSN2 (M)
NRG1 (M)	NRG1 (H)
PBF1 (Z)	PBF2 (Z)
PDR1 (Z)	SIP4 (Z)
PDR3 (M)	PDR3 (H)
PHO4 (M)	PHO4 (H)
RAP1 (H)	RAP1 (B)
RCS1 (H)	AFT1 (Z)
RCS1 (M)	AFT2 (M)
RDS1 (H)	RDS1 (Z)
RDS1 (M)	RDS1 (B)
REB1 (H)	STB2 (M)
REB1 (M)	YDR026C (H)
RFX1 (M)	RFX1 (H)
RGM1 (B)	MSN2 (B)
RGT1 (B)	RGT1 (Z)
RIM101 (M)	RIM101 (H)
RPH1 (M)	RPH1 (H)
SFP1 (H)	RAP1 (B)

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TF (Study)	Equivalent
SIP4 (M)	SIP4 (H)
SMP1 (M)	SMP1 (H)
SNT2 (M)	SNT2 (H)
SPT23 (M)	SPT23 (H)
SRD1 (B)	GAT3 (B)
STB4 (B)	CEP3 (B)
STB4 (M)	STB4 (H)
STE12 (H)	STE12 (B)
STE12 (M)	STE12 (B)
STP4 (B)	STP3 (B)
SUM1 (M)	SUM1 (H)
SWI4 (H)	SWI4 (B)
SWI4 (M)	SWI4 (B)
SWI6 (H)	SWI4 (B)
TBS1 (B)	TBS1 (Z)
TEC1 (B)	TEC1 (Z)
THI2 (M)	THI2 (H)
TYE7 (H)	TYE7 (Z)
TYE7 (M)	CBF1 (M)
UGA3 (M)	UGA3 (H)
UME6 (H)	UME6 (Z)
YAP1 (Z)	CIN5 (H)
YAP3 (H)	ARR1 (H)
YAP3 (M)	ARR1 (H)
YAP5 (H)	ARR1 (H)
YAP6 (H)	ARR1 (H)
YAP7 (M)	YAP7 (H)
YBR239C (Z)	SIP4 (Z)
YDR520C (B)	YKL222C (Z)
YER130C (B)	YER130C (Z)
YGR067C (B)	MIG1 (B)
YHP1 (M)	YHP1 (H)
YNR063W (B)	YNR063W (Z)
YOX1 (B)	YOX1 (Z)

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TF (Study)	Equivalent
YPL230W (B)	MSN2 (B)
YPR013C (Z)	YPR015C (Z)
YPR196W (B)	YPR196W (Z)
YRM1 (B)	YKL222C (B)
YRM1 (Z)	YKL222C (Z)