

**Table S1. Strains used in this study**

Strain	Genotype	Parent	Reference
H99	<i>MAT<math>\alpha</math></i>		[1]
YSB64	<i>MAT<math>\alpha</math> hog1<math>\Delta</math>::NAT-STM#177</i>	H99	[2]
YSB42	<i>MAT<math>\alpha</math> cac1<math>\Delta</math>::NAT-STM#159</i>	H99	[3]
YSB53	<i>MAT<math>\alpha</math> ras1<math>\Delta</math>::NAT-STM#150</i>	H99	[3]
KK1	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117</i>	H99	[4]
KK2	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117</i>	H99	[4]
KK3	<i>MAT<math>\alpha</math> mpk1<math>\Delta</math>::NAT-STM#150</i>	H99	[4]
YSB552	<i>MAT<math>\alpha</math> ire1<math>\Delta</math>::NAT-STM#224</i>	H99	[5]
YSB723	<i>MAT<math>\alpha</math> hxl1<math>\Delta</math>::NAT-STM#295</i>	H99	[5]
YSB3785	<i>MAT<math>\alpha</math> rad53<math>\Delta</math>::NAT-STM#184</i>	H99	[6]
YSB1263	<i>MAT<math>\alpha</math> crz1<math>\Delta</math>::NAT-STM#231</i>	H99	[7]
KW308	<i>MAT<math>\alpha</math> ire1<math>\Delta</math>::NAT-STM#224 hxl1<math>\Delta</math>::NEO</i>	YSB552	[8]
KW309	<i>MAT<math>\alpha</math> ire1<math>\Delta</math>::NAT-STM#224 hxl1<math>\Delta</math>::NEO</i>	YSB552	[8]
KW610	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 ire1<math>\Delta</math>::NEO</i>	KK1	This study
KW611	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 ire1<math>\Delta</math>::NEO</i>	KK1	This study
KW614	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 ire1<math>\Delta</math>::NEO</i>	KK2	This study
KW615	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 ire1<math>\Delta</math>::NEO</i>	KK2	This study
KW629	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 hog1<math>\Delta</math>::NEO</i>	KK1	This study
KW632	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 hog1<math>\Delta</math>::NEO</i>	KK1	This study
KW630	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 hog1<math>\Delta</math>::NEO</i>	KK2	This study
KW637	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 hog1<math>\Delta</math>::NEO</i>	KK2	This study
KW638	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 hog1<math>\Delta</math>::NEO</i>	KK2	This study
KW986	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 crz1<math>\Delta</math>::NEO</i>	KK1	This study
KW1009	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 crz1<math>\Delta</math>::NEO</i>	KK1	This study
KW1010	<i>MAT<math>\alpha</math> cna1<math>\Delta</math>::NAT-STM#117 crz1<math>\Delta</math>::NEO</i>	KK1	This study
KW987	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 crz1<math>\Delta</math>::NEO</i>	KK2	This study
KW1011	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 crz1<math>\Delta</math>::NEO</i>	KK2	This study
KW1012	<i>MAT<math>\alpha</math> cnb1<math>\Delta</math>::NAT-STM#117 crz1<math>\Delta</math>::NEO</i>	KK2	This study
KW753	<i>MAT<math>\alpha</math> CPY-4xFLAG-NEO</i>	H99	This study
KW754	<i>MAT<math>\alpha</math> CPY-4xFLAG-NEO</i>	H99	This study
KW755	<i>MAT<math>\alpha</math> CPY-4xFLAG-NEO</i>	H99	This study

Each NAT-STM# indicates the Nat<sup>r</sup> marker with a unique signature tag.

## References

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