

Table S1 Yeast strains used in this study

Strain number	Genotype	Source
FY11	<i>h- ade6-M210</i>	Our stock
FY528	<i>h+ his3-D1 ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY527	<i>h- his3-D1 ura4-D18 leu1-32 ade6-M216</i>	Our stock
FY5627	<i>h- Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5698	<i>h- Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5625	<i>h+ Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5699	<i>h+ Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY444	<i>h+ rad8-190 ura4-D18 leu1-32 ade6-704</i>	Our stock
FY1884	<i>h- smt-0 Δrad51::ura4+ ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY6785	<i>h- smt-0 Δrad51::ura4+ Δrad8::hphMX ura4-D18 leu1-32 ade6-M210</i>	This study
FY1866	<i>h- smt-0 Δrad54::ura4+ ura4-D18 leu1-32 ade6-M216</i>	Our stock
FY6868	<i>h- smt-0 Δrad54::ura4+ Δrad8::hphMX ura4-D18 leu1-32 ade6-M216</i>	This study
FY1389	<i>h- smt-0 Δrad55::ura4+ ura4-D18</i>	Our stock
FY6809	<i>h- smt-0 Δrad55::ura4+ Δrad8::hphMX ura4-D18 ade6-M216</i>	This study
FY3770	<i>h- smt-0 Δrad57::ura4+ his3-D1 ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY6790	<i>h- smt-0 Δrad57::ura4+ Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6397	<i>h- loxP-dna2-K961T-loxM3 ura4-D18 leu1-32 ade6-704</i>	AW525 (Hu et al., 2012)
FY6428	<i>h- loxP-dna2-K961T-loxM3 Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY6452	<i>h- dna2ts:ura4 ura4-D18</i>	This study
FY6505	<i>h- dna2ts:ura4 Δrad8::hphMX his3-D1 ura4-D18 ade6-M216</i>	(Hu et al., 2012)
FY254	<i>h- ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6314	<i>h- loxP-rad8*-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	Our stock
FY6322	<i>h- loxP-Δrad8-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6316	<i>h- loxP-rad8-ΔHIRAN-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6514	<i>h- loxP-rad8ΔHIRAN::SV40NLS-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6516	<i>h- loxP-rad8ΔHIRAN::rad8NLS-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6518	<i>h- loxP-rad8-ΔNLS-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6520	<i>h- loxP-rad8-HIRAN-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6318	<i>h- loxP-rad8-K535AT536A-loxM3 leu1-32 ade6-M210 can1-1</i>	This study
FY6320	<i>h- loxP-rad8-I879A-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6284	<i>h- loxP-rad8-K535AT536AI879A-loxM3 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY7012	<i>h- loxP-rad8*-5FLAG::KanMX6 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY6905	<i>h- loxP-rad8-K535AT536A-5FLAG::KanMX6 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study

FY6959	<i>h- loxP-rad8-I879A- 5FLAG::KanMX6 ura4-D18 leu1-32 ade6-M210 can1-1</i>	This study
FY5904	<i>h- rad8-5FLAG::kanMX6 his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY3123	<i>h- Δrhp18::ura4+ ura4-D18 leu1-32 ade6-704</i>	Our stock
FY6617	<i>h- Δrhp18::ura4+ Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M704</i>	This study
FY6628	<i>h- Δmms2::leu2 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY6619	<i>h- Δmms2::leu2 Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6929	<i>h- pcn1-K164R::ura4+ his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6115	<i>h- pcn1-K164R::ura4+ Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6816	<i>h- pcn1-K164R::ura4+ loxP-rad8-K535AT536A-loxM3 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6875	<i>h- pcn1-K164R::ura4+ loxP-rad8-I879A-loxM3 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5128	<i>h- Δsrs2::kan his3-D1 ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY5744	<i>h- Δsrs2::kan Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY4841	<i>h- eso1::kanMX6 kpa1::bleMX6 rev3::hphMX6 his3-D1 ura4-D18 leu1-32 ade6-M216</i>	Our stock
FY6863	<i>h- eso1::kanMX6 kpa1::bleMX6 rev3::hphMX6 Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
		This study
		From
		MCW2080
		(Sun et al.,
		2008)
FY5555	<i>h- Δfml1::natMX4 his3-D1 ura4-D18 leu1-32</i>	This study
FY6436	<i>h- Δfml1::natMX4 Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5587	<i>h- Δfml2::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5726	<i>h- Δfml2::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
		This study
		From
		MCW2082
		(Sun et al.,
		2008)
FY6936	<i>h- Δfml1::natMX4 Δfml2::KanMX6 his3-D1 ura4-D18 leu1-32</i>	This study
FY5717	<i>h- Δfml1::natMX4 Δfml2::KanMX6 Δrad8::hphMX his3-D1 ura4-D18 leu1-32</i>	This study
FY6764	<i>h- Δfml1::natMX4 Δfml2::KanMX6 loxP-rad8-K535AT536A-loxM3 ura4-D18 leu1-32</i>	This study
FY6759	<i>h- Δfml1::natMX4 Δfml2::KanMX6 loxP-rad8-K535AT536AI879A-loxM3 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6766	<i>h- Δfml1::natMX4 Δfml2::KanMX6 loxP-rad8-I879A-loxM3 his3-D1 ura4-D18 leu1-32</i>	This study
	<i>h- pcn1-K164R::ura4+ Δfml1::natMX4 Δfml2::KanMX6 loxP-rad8-K535AT536A-loxM3 his3-D1 ura4-D18 leu1-32</i>	
FY6825	<i>ade6-M210</i>	This study
FY6826	<i>h- pcn1-K164R::ura4+ Δfml1::natMX4 Δfml2::KanMX6 Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
		This study
		From
		MCW2080
		(Sun et al.,
		2008)
FY6257	<i>h- Δfml1::natMX4 his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY6941	<i>h- pcn1-K164R::ura4+ Δfml1::natMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
		This study
		From
FY6948	<i>h- Δfml2::KanMX6 ura4-D18 leu1-32 ade6-M210</i>	From
		MCW2082

		(Sun et al., 2008)
FY6946	<i>h- pcn1-K164R::ura4+ Δfml2::KanMX6 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6932	<i>h- pcn1-K164R::ura4+ Δfml1::natMX4 Δfml2::KanMX6 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY2732	<i>h- Δrad32::kanMX ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY5892	<i>h- Δrad32::kanMX Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY2733	<i>h- Δrad50::kanMX ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY5888	<i>h- Δrad50::kanMX Δrad8::hphMX ura4-D18 leu1-32 ade6-M216</i>	This study
FY2734	<i>h- Δnbs1::kanMX ura4-D18 leu1-32</i>	Our stock
FY5895	<i>h- Δnbs1::kanMX Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5428	<i>h- Δexo1::ura4+ ura4-D18 ade6-M210</i>	Our stock
FY6141	<i>h- Δexo1::ura4+ Δrad8::hphMX ura4-D18 ade6-M210</i>	This study
FY6820	<i>h- Δexo1::ura4+ loxP-rad8-K535AT536A-loxM3 his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY6879	<i>h- Δexo1::ura4+ loxP-rad8-I879A-loxM3 his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY790	<i>h- rad11A-ts ura4-D18 leu1-32 ade6-M216</i>	Our stock
FY6797	<i>h- rad11A-ts Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY3288	<i>h- Δmus81::KanMX ura4-D18 ade6-M210</i>	Our stock
FY6118	<i>h- Δmus81::KanMX Δrad8::hphMX his3-D1 ura4-D18 ade6-M210</i>	This study
FY865	<i>h- Δcds1::ura4 ura4-D18 leu1-32</i>	Our stock
FY5739	<i>h- Δcds1::ura4+ Δrad8::hphMX ura4-D18 leu1-32</i>	This study
FY6906	<i>h- Δcds1::ura4 loxP-rad8-K535AT536A-loxM3 ura4-D18 leu1-32 ade6-M216</i>	This study
FY6897	<i>h- Δcds1::ura4 loxP-rad8-I879A-loxM3 ura4-D18 leu1-32 ade6-M216</i>	This study
FY4685	<i>h- Δmrc1::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-?</i>	Our stock
FY5742	<i>h- Δmrc1::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY3529	<i>h+ Δmrc1::ura4+ leu1+::(mrc1(all S/TQ to AQ)-3HA) ura4-D18 ade6?</i>	Our stock
FY5885	<i>h- Δmrc1::ura4+ leu1+::(mrc1(all S/TQ to AQ)-3HA) Δrad8::hphMX his3-D1 ura4-D18 ade6-M210</i>	This study
FY3229	<i>h- Δswi3::KanMX ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY5784	<i>h- Δswi3::KanMX Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY3226	<i>h- Δswi1::kanMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	Our stock
FY5783	<i>h- Δswi1::KanMX Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6812	<i>h- Δswi1::KanMX loxP-rad8-K535AT536A-loxM3 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6871	<i>h- Δswi1::KanMX loxP-rad8-I879A-loxM3 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6821	<i>h- Δswi1::kanMX pcn1-K164R::ura4 his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY6400	<i>h- Δrad8::hphMX his3-D1 ura4-D18 ade6-M210</i>	This study
FY6370	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8-K535AT536A-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY6372	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8-I879A-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY6374	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8-K535AT536I879A-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY6402	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8-ΔHIRAN-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY6522	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8ΔHIRAN::SV40NLS-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY6524	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8ΔHIRAN::rad8NLS-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study

FY6526	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8-no-NLS-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY6528	<i>h- Δrad8::hphMX leu1-32::(nmt1-rad8-HIRAN-GFP-leu1+) his3-D1 ura4-D18 ade6-M210</i>	This study
FY3779	<i>h- Δfbh1::kanMX leu1-32 ura4-D18</i>	Our stock
FY5731	<i>h- Δfbh1::kanMX Δrad8::hphMX ura4-D18 leu1-32 ade6-M216</i>	This study
FY5745	<i>h- Δtlh2::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5746	<i>h+ Δtlh2::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M216</i>	This study
FY5747	<i>h- Δswr1::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5748	<i>h- Δswr1::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5749	<i>h- ΔSPAC144.05::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5750	<i>h+ ΔSPAC144.05::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M210</i>	This study
FY5751	<i>h+ Δrrp1::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5752	<i>h- Δrrp1::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5753	<i>h+ Δrdh54::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5754	<i>h- Δrdh54::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M210</i>	This study
FY5755	<i>h- Δchl1::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5756	<i>h+ Δchl1::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M210</i>	This study
FY5757	<i>h- ΔSPAC694.02::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5758	<i>h+ ΔSPAC694.02::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5759	<i>h- ΔSPBC15C4.05::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5760	<i>h+ ΔSPBC15C4.05::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5761	<i>h+ Δrrp2::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5762	<i>h- Δrrp2::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M216 his3-D1</i>	This study
FY5763	<i>h+ Δhrp1::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M216 his3-D1</i>	This study
FY5764	<i>h+ Δhrp1::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M210</i>	This study
FY5765	<i>h- Δrhp26::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5766	<i>h+ Δrhp26::kanMX6-Bioneer Δrad8::hphMX leu1-32 ura4-D18 ade6-M216</i>	This study
FY5767	<i>h+ Δirc3::kanMX6-Bioneer leu1-32 ura4-D18 ade6-M210</i>	This study
FY5768	<i>h- Δirc3::kanMX6-Bioneer Δrad8::hphMX his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5769	<i>h- ΔSPBC582.10C::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M210</i>	This study
FY5770	<i>h+ ΔSPBC582.10C::kanMX6-Bioneer Δrad8::hphMX ura4-D18 leu1-32 ade6-M210</i>	This study
FY5771	<i>h+ ΔSPCC737.07c::kanMX6-Bioneer his3-D1 ura4-D18 leu1-32 ade6-M216</i>	This study
FY5772	<i>h+ ΔSPCC737.07c::kanMX6-Bioneer Δrad8::hphMX ura4-D18 leu1-32 ade6-M210</i>	This study
FY5773	<i>h- Δhrp3::kanMX6-Bioneer his3-D1 leu1-32 ura4-D18 ade6-M216</i>	This study
FY5774	<i>h- Δhrp3::kanMX6-Bioneer Δrad8::hphMX ura4-D18 leu1-32 ade6-M210</i>	This study
FY4777	<i>h- Δsnf22::KanMX ura4-D18 leu1-32</i>	This study
FY5779	<i>h- Δsnf22::KanMX Δrad8::hphMX his3-D1 ura4-D18 leu1-32</i>	This study HT21 (Boule and Zakian, 2006)
FY4703	<i>h- pfh1-R20 leu1-32</i>	

FY6483	<i>h- pfh1-R20 Δrad8::hphMX ura4-D18 leu1-32 ade6-M216</i>	This study
FY6337	<i>h- Δrad8::hphMX ade6-M210</i>	This study
FY6434	<i>h- rad8-GFP::kanMX6 ade6-M210</i>	This study
FY2194	<i>h- Δrad3::ura4+ ura4-D18 ade6-M216</i>	Our stock
FY6315	<i>h- loxP-rad8⁺-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6317	<i>h- loxP-rad8-ΔHIRAN-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6319	<i>h- loxP-rad8-K535AT536A-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6321	<i>h- loxP-rad8-I879A-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6284	<i>h- loxP-rad8-K535AT536AI879A-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6323	<i>h- loxP-Δrad8-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6394	<i>h- loxP-rad8-S18D-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
FY6399	<i>h- loxP-rad8-S18A-loxM3 leu1-32 ade6-M210 ura4-D18 can1-1</i>	This study
