

**Table S1.** Yeast strains

Strain	Genotype
TBR5514	<i>MATa ho::hisG leu2::hisG ura3(Δ Sma-Pst) HIS4::LEU2-(NBam) sae2::KAN</i> ----- <i>MATα ho::hisG leu2::hisG ura3(Δ Sma-Pst) his4X::LEU2-(NBam)-URA3 sae2::KAN</i>
TBR5515	TBR5514 but homozygous <i>pch2::HYG</i>
TBR5188	TBR5514 but homozygous <i>tel1::NAT</i>
TBR6618	<i>MATa ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG sae2::KAN ndt80::LEU2</i> ----- <i>MATα ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG sae2::KAN ndt80::LEU2</i>
TBR6619	TBR6618 but homozygous <i>pch2::HYG</i>
TBR6620	TBR2065 but homozygous <i>tel1::NAT</i>
TBR6920	<i>MATa ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG rad51::hisG dmc1:: NAT</i> ----- <i>MATα ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG rad51::hisG dmc1:: NAT</i>
TBR6742	TBR6920 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17</i>
TBR6939	TBR6920 but homozygous <i>spo11-HA::KAN</i>
TBR6904	TBR6920 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17 spo11-HA::KAN</i>
TBR6908	TBR6920 but homozygous <i>pch2::HYG</i>

TBR6864	TBR6920 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17 pch2::HYG</i>
TBR6918	<i>MAT<math>\alpha</math> ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG rad51::hisGURA3hisG dmc1::NAT ndt80::LEU2</i> ----- <i>MAT<math>\alpha</math> ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG rad51::hisGURA3hisG dmc1::NAT ndt80::LEU2</i>
TBR6884	TBR6918 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17</i>
TBR6396	TBR6918 but homozygous <i>spo11-HA::KAN</i>
TBR6888	TBR6918 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17 spo11-HA::KAN</i>
TBR6906	TBR6918 but homozygous <i>pch2::HYG</i>
TBR6862	TBR6918 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17 pch2::HYG</i>
TBR3451	<i>MAT<math>\alpha</math> ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG</i>
TBR6730	TBR3451 but <i>KAN-P<sub>CLB2</sub>-HA-RAD17</i>
TBR5696	TBR3451 but <i>rad17::NAT</i>
TBR5697	TBR3451 <i>MAT<math>\alpha</math> rad17::NAT</i>
TBR6621	<i>MAT<math>\alpha</math> ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG</i> ----- <i>MAT<math>\alpha</math> ho::LYS2 lys2 ura3 leu2::hisG his3::hisG trp1::hisG</i>
TBR6749	TBR6921 but homozygous <i>KAN-P<sub>CLB2</sub>-HA-RAD17</i>

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All listed strains are SK1 derivatives.