

1 **Expanded View table 1.** Yeast strains used in this study.

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YBP641	<i>MATa bar1Δ ura3::URA3::GPD-TK₇</i>
YBP642	<i>MATa bar1ΔNatMX6 rad3-102::HphMX6 ura3::URA3::GPD-TK₇</i>
YBP643	<i>MATa bar1ΔNatMX6 mus81ΔKanMX4 ura3::URA3::GPD-TK₇</i>
YBP645	<i>MATa bar1Δ rad3-102::HphMX6 mus81ΔKanMX4 ura3::URA3::GPD-TK₇</i>
YBP782	<i>MATa bar1Δ mus81-dd ura3::URA3::GPD-TK₇</i>
YBP785	<i>MATa bar1Δ rad3-102::HphMX6 mus81-dd ura3::URA3::GPD-TK₇</i>
YREC102-51	<i>MATa rad3-102::HphMX6 mus81ΔKanMX4 rad51ΔKanMX4</i>
YBP1068	<i>MATa bar1Δ rad3-102::HphMX6 rad51Δ::LEU2 ura3::URA3::GPD-TK₇</i>
PP3558	<i>MATa RAD52-YFP RFA1-CFP ura3::mCHERRY-PUS1::URA3</i>
PP3562	<i>MATa RAD52-YFP RFA1-CFP mus81Δ::NatMX6 ura3::mCHERRY-PUS1::URA3</i>
YBP699	<i>MATa bar1Δ rad52Δ::klTRP1MX6 Mms4-His6-Flag10::KanMX4 ura3::URA3::GPD-TK₇</i>
WS-M11	<i>MATa mre11Δ::KanMX4</i>
WS-R50	<i>MATa rad50ΔKanMX4</i>
WS-X2	<i>MATa xrs2ΔKanMX4</i>
YBP665	<i>MATa bar1Δ rad51Δ::HphMX6 ura3::URA3::GPD-TK₇</i>
YBP667	<i>MATa bar1Δ pol32Δ::NatMX6 ura3::URA3::GPD-TK₇</i>
YBP669	<i>MATa bar1Δ rad51Δ::HphMX6 pol32Δ::NatMX6 ura3::URA3::GPD-TK₇</i>
YREC102-49	<i>MATa mus81ΔKanMX4 rad51ΔKanMX4</i>
YREC102-47	<i>MATa mus81ΔKanMX4 pol32ΔHphMX6</i>
YBP716	<i>MATa bar1Δ mms4Δ::klTRP1MX6 ura3::URA3::GPD-TK₇</i>
YBP759	<i>MATa bar1Δ rad3-102::HphMX6 mms4Δ::klTRP1MX6 ura3::URA3::GPD-TK₇</i>
YBP727	<i>MATa bar1Δ pADH1-HA3-mms4-9A::HIS3</i>
YBP732	<i>MATa bar1Δ mms4-14A-HA3::URA3</i>
YBP671	<i>MATa bar1Δ Mms4-His6-Flag10::KanMX4 ura3::URA3::GPD-TK₇</i>
YBP673	<i>MATa bar1Δ rad3-102::HphMX6 Mms4-His6-Flag10::KanMX4 ura3::URA3::GPD-TK₇</i>

YBP697	<i>MATa bar1Δ yen1Δ::klTRP1MX6 Mms4-His6-Flag10::KanMX4 ura3::URA3::GPD-TK₇</i>
YBP712	<i>MATa bar1Δ::NatMX6 mus81Δ::KanMX4 yen1Δ::klTRP1MX6 ura3::URA3::GPD-TK₇</i>
YREC105-24	<i>MATa rad3-102::HphMX6 yen1Δ::KanMX4</i>
YBP1178	<i>MATa bar1Δ mre11-3::URA3</i>
YBP1179	<i>MATa bar1Δ yku70Δ::KanMX6</i>
YBP1180	<i>MATa bar1Δ mre11-3::URA3 yku70Δ::KanMX6</i>
YBP1181	<i>MATa bar1Δ rad3-102::HphMX6 mre11-3::URA3</i>
YBP1183	<i>MATa bar1Δ rad3-102::HphMX6 yku70Δ::KanMX6</i>
YBP1185	<i>MATa bar1Δ rad3-102::HphMX6 mre11-3::URA3 yku70Δ::KanMX6</i>
YBP1187	<i>MATa bar1Δ exo1Δ::HIS3</i>
YBP1189	<i>MATa bar1Δ mre11-3::URA3 exo1Δ::HIS3</i>
YBP1191	<i>MATa bar1Δ exo1Δ::HIS3 yku70Δ::KanMX6</i>
YBP1193	<i>MATa mre11-3::URA3 exo1Δ::HIS3 yku70Δ::KanMX6</i>
YBP1195	<i>MATa bar1Δ rad3-102::HphMX6 exo1Δ::HIS3</i>
YBP1197	<i>MATa rad3-102::HphMX6 mre11-3::URA3 exo1Δ::HIS3</i>
YBP1199	<i>MATa bar1Δ rad3-102::HphMX6 exo1Δ::HIS3 yku70Δ::KanMX6</i>
YBP1201	<i>MATa rad3-102::HphMX6 mre11-3::URA3 exo1Δ::HIS3 yku70Δ::KanMX6</i>
LSY2743-1.1	<i>MATa-inc bar1Δ::LEU2 ade3::pGAL-HO ura3::URA3::GPD-TK₇ lys2Δ::NatMX4 avt2::lys-HOcs::KanMX6 cos9::TRP1-ys2</i>
LSY2753-3.8	<i>MATa-inc bar1Δ::LEU2 ade3::pGAL-HO ura3::URA3::GPD-TK₇ lys2Δ::NatMX4 avt2::lys-HOcs::KanMX6 cos9::TRP1-ys2 pol32Δ::KanMX6</i>
LSY2824-21D	<i>MATa-inc bar1Δ::LEU2 ade3::pGAL-HO ura3::URA3::GPD-TK₇ lys2Δ::NatMX4 avt2::lys-HOcs::KanMX6 cos9::TRP1-ys2 rad51Δ::LEU2</i>
PP3475	<i>MATa-inc bar1Δ::LEU2 ade3::pGAL-HO ura3::URA3::GPD-TK₇ lys2Δ::NatMX4 avt2::lys-HOcs::KanMX6 cos9::TRP1-ys2 pol32Δ::KanMX6 rad51Δ::HphMX6</i>
PP3476	<i>MATa-inc bar1Δ::LEU2 ade3::pGAL-HO ura3::URA3::GPD-TK₇ lys2Δ::NatMX4 avt2::lys-HOcs::KanMX6 cos9::TRP1-ys2</i>

	<i>pol32Δ::KanMX6 rad51Δ::HphMX6</i>
PP708	<i>MATα ura3::URA3::GPD-TK₇ rev3Δ ::NatMX4</i>
YBP1203	<i>MATa bar1Δ rad3-102::HphMX6 wss1Δ::KanMX4</i>
YBP1204	<i>MATa bar1Δ rad3-102::HphMX6 wss1Δ::KanMX4</i>
YBP1206	<i>MATa bar1Δ wss1Δ::KanMX4</i>
YBP1207	<i>MATa tdp1Δ::NatMX6</i>
YBP1209	<i>MATa bar1Δ rad3-102::HphMX6 tdp1Δ::NatMX6</i>
YBP1097	<i>MATa bar1Δ rad3-102::HphMX6 NatMX6::G2-MUS81</i>
YBP1101	<i>MATa NatMX6::G2-MUS81</i>
YBP816	<i>MATa bar1Δ rad52Δ::klLEU2 mus81Δ::KanMX4</i>
YBP1237	<i>MATa bar1Δ NatMX6::S-MUS81</i>
YBP1239	<i>MATa bar1Δ rad3-102::HphMX6 NatMX6::S-MUS81</i>
YBP1241	<i>MATa bar1Δ NatMX6::S-MUS81-HA3::klTRP1</i>
PP3779	<i>MATa bar1Δ::NatMX4 cdc5-2::URA3</i>

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