

Table S1. Genotypes of yeast strains used in this study

| Strain: | Genotype: | Source |
|---|---|------------------------------|
| UCC8650 | <i>MATa, his3Δ1, leu2Δ0, lys2Δ0, ura3Δ0, hoΔ::PSCW11-cre-EBD78-NATMX</i> | D. Gottschling |
| JRY527 (s288c) | <i>MATa, ade2-101, lys2, ura3-52, his3Δ200, met2</i> | Lab collection |
| JRY4012 (W303-1a) | <i>MATa, his3, leu2, lys2, trp1, ura3, can1</i> | R. Rothstein/ Lab collection |
| JRY8822 (<i>S. bayanus</i>) | <i>MATa, lys2Δ, ura3Δ, hoΔ::NAT^{MX}</i> | Lab collection |
| JRY9135 (<i>S. paradoxus</i>) | <i>MATa, lys2Δ, ura3Δ, hoΔ::NAT^{MX}</i> | Lab collection |
| JRY9628 | <i>ADE2, lys2, TRP1, hmlα2Δ::CRE, matΔ::NatMX, ura3Δ::pGPD:loxP:yEmRFP;tCYC1:KanMX:loxP:yEGFP:tADH1</i> | Lab collection |
| JRY10759 (W303 x W303) | <i>ADE2, lys2, trp1-1/TRP1, HML/hmlα2Δ::CRE, ura3-1/ura3Δ::pGPD:loxP:yEmRFP;tCYC1:KanMX:loxP:yEGFP:tADH1</i> | This Study |
| JRY10762 (W303 x s288c) | <i>ade2-101/ADE2, lys2, TRP1, HML/hmlα2Δ::CRE, ura3-52/ura3Δ::pGPD:loxP:yEmRFP;tCYC1:KanMX:loxP:yEGFP:tADH1, his3Δ200/HIS3, met2/MET2</i> | This Study |
| JRY10765 (<i>S. cerevisiae</i> x <i>S. bayanus</i>) | <i>ADE2, lys2, TRP1, HML/hmlα2Δ::CRE, ura3Δ/ura3Δ::pGPD:loxP:yEmRFP;tCYC1:KanMX:loxP:yEGFP:tADH1, hoΔ::NAT^{MX}/ho</i> | This Study |
| JRY10768 (<i>S. cerevisiae</i> x <i>S. paradoxus</i>) | <i>ADE2, lys2, TRP1, HML/hmlα2Δ::CRE, ura3Δ/ura3Δ::pGPD:loxP:yEmRFP;tCYC1:KanMX:loxP:yEGFP:tADH1, hoΔ::NAT^{MX}/ho</i> | This Study |
| JRY10776 | <i>MATα ADE2, lys2, TRP1, hmlα2Δ::CRE, ura3Δ::pGPD:loxP:yEmRFP;tCYC1:KanMX:loxP:yEGFP:tADH1</i> | This Study |
| JRY10779 | <i>MATa his3 leu2 lys2 trp1 ura3 can1 sir2Δ::KAN^{MX}</i> | This Study |
| JRY10782 | <i>MATα ADE2, lys2, TRP1, ura3Δ::pGPD:loxP:yEmRFP;tCYC1:Kan^{MX}:loxP:yEGFP:tADH1</i> | This Study |
| JRY10786 | <i>MATα ADE2, lys2, TRP1, ura3Δ::pGPD:loxP:yEmRFP;tCYC1:Kan^{MX}:loxP:yEGFP:tADH1 hoΔ::PSCW11-cre-EBD78-NATMX</i> | This Study |
| JRY10787 | <i>MATα ADE2, lys2, TRP1, ura3Δ::pGPD:loxP:yEmRFP;tCYC1:Kan^{MX}:loxP:yEGFP:tADH1 hoΔ::PSCW11-cre-EBD78-NATMX sir2Δ::NAT^{MX}</i> | This Study |