Table S1 – Yeast strains used in this study.

|  |  |  |
| --- | --- | --- |
| **DLY** | **Relevant genotype** | **Origin** |
| 3001 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5* | Rodney Rothstein |
| 8460 | *MAT a ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5* | Rodney Rothstein |
| 1108 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 cdc13-1-int* | Lydall lab |
| 1215 | *MATa chk1::HIS3 ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 yku70::LEU2 RAD5* | Lydall lab |
| 1272 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 exo1::LEU2* | Lydall lab |
| 1273 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 exo1::LEU2* | Lydall lab |
| 1317 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 rad53::HIS3 sml1::KanMX4 hdf1::LEU2* | Lydall lab |
| 1320 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 rad53::HIS3 sml1::KanMX4* | Lydall lab |
| 1409 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 yku70::HIS3 exo1::LEU2* | Lydall lab |
| 1412 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 yku70::HIS3* | Lydall lab |
| 1479 | *MATalpha, mre11::hisG::URA3* | Lydall lab |
| 1577 | *MATa CDC13 sae2::TRP ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2* | Lydall lab |
| 1836 | *MATa yku70::LEU2 sgs1::KANMX* | Lydall lab |
| 1837 | *MATa yku70::LEU2 sgs1::KANMX* | Lydall lab |
| 1839 | *MATalpha sgs1::KANMX* | Lydall lab |
| 2239 | *Mat a sml1::kanMX6 RAD5 CDC+ ade2-1 trp1-1 can1-100 ura3 GAL+ psi+ ssd1-d2* | Lydall lab |
| 5337 | *MATalpha RAD5 ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 rad27::TRP1* | Lydall lab |
| 7085 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 yku70::HIS3 sml1::URA3* | Lydall lab |
| 9183 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX* | This study |
| 9184 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX* | This study |
| 9187 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX cdc13-1* | This study |
| 9421 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX exo1::LEU2* | This study |
| 9422 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX exo1::LEU2ex* | This study |
| 10002 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3::SEC7-EGFP::URA3 GAL+ psi+ ssd1-d2 RAD5* | This study |
| 10017 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2* | This study |
| 10018 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2* | This study |
| 10740 | *Mata ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX sae2::TRP1* | This study |
| 10741 | *Matalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX sae2::TRP1* | This study |
| 10742 | *Mata ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::HIS3 sae2::TRP1* | This study |
| 10743 | *Matalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::HIS3 sae2::TRP1* | This study |
| 10744 | *Mata ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX exo1::LEU2 sae2::TRP1* | This study |
| 10745 | *Matalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX exo1::LEU2 sae2::TRP1* | This study |
| 10746 | *Mata ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::HIS3 exo1::LEU2 sae2::TRP1* | This study |
| 10747 | *Matalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::HIS3 exo1::LEU2 sae2::TRP1* | This study |
| 10748 | *Mata ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX mre11::URA3* | This study |
| 11004 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX sml1::HIS3* | This study |
| 11006 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX chk1::HIS3* | This study |
| 11007 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX chk1::HIS3* | This study |
| 11008 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2 chk1::HIS3* | This study |
| 11009 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2 chk1::HIS3* | This study |
| 11011 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2 sgs1::NatMX* | This study |
| 11012 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2 sgs1::NatMX* | This study |
| 11022 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX rad53::HIS3 sml1::URA3* | This study |
| 11023 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX rad53::HIS3 sml1::URA3* | This study |
| 11024 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2 rad53::HIS3 sml1::URA3* | This study |
| 11025 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX yku70::LEU2 rad53::HIS3 sml1::URA3* | This study |
| 11121 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-GFP-KANMX6* | This study |
| 11141 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-13MYC-KANMX6* | This study |
| 11142 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-13MYC-KANMX6* | This study |
| 11143 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-13MYC-KANMX6 cdc13-1* | This study |
| 11144 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-13MYC-KANMX6 cdc13-1* | This study |
| 11717 | *Matalpha yku70::NATMX can1Δ::STE2pr-Sp\_his5 lyp1::HPH::LEU2 his3Δ leu3Δ ura3Δ* | S288C backgroundThis study |
| 11718 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX sgs1::NatMX* | This study |
| 11719 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 vps74::KANMX sgs1::NatMX* | This study |
| 11795 | *Matalpha vps74::HPHMX can1Δ::STE2pr-Sp\_his5 lyp1::LEU2::natNT2 his3Δ leu3Δ ura3Δ* | S288C backgroundThis study |
| 11813 | *MATa STN1-MYC ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5* | This study |
| 11817 | *MATa STN1-MYC nmd2::HIS3 ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5* | This study |
| 11829 | *MATa STN1-MYC tma20::KANMX ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5* | This study |
| 11851 | *Matalpha vps74::HPHMX yku70::NATMX can1Δ::STE2pr-Sp\_his5 lyp1::LEU2 his3Δ leu3Δ ura3Δ* | S288C backgroundThis study |
| 12031 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-13MYC-KANMX6 yku70::HIS3* | This study |
| 12032 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 VPS74-13MYC-KANMX6 yku70::HIS3* | This study |
| 12404 | *MATa URA3-STN1-101-13MYC-TRP RAD5* | This study |
| 12438 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 STN1-MYC:TRP* | This study |
| 12439 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 STN1-MYC:TRP* | This study |
| 12440 | *MATalpha ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 STN1-MYC:TRP vps74::KANMX6* | This study |
| 12441 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 STN1-MYC:TRP vps74::KANMX6* | This study |
| 12442 | *MATa ade2-1 trp1-1 can1-100 leu2-3,112 his3-11,15 ura3 GAL+ psi+ ssd1-d2 RAD5 STN1-MYC:TRP vps74::KANMX6* | This study |