

TABLE S1. *S. cerevisiae* strains used in this study.

Strain	Relevant genotype	Source
YLL 1772/1D	<i>sae2Δ::NATMX4::SAE2::LEU2/sae2Δ::NATMX4::SAE2::LEU2</i> <i>MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 1602/2C	<i>sae2Δ::NATMX4/sae2Δ::NATMX4 MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 2341/17D	<i>sae2Δ::NATMX4::sae2-S267A::LEU2/sae2Δ::NATMX4::sae2-S267A::LEU2</i> <i>MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 2340/6C	<i>sae2Δ::NATMX4::sae2-S267D::LEU2/sae2Δ::NATMX4::sae2-S267D::LEU2</i> <i>MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 1600/1A	<i>dmc1Δ::KANMX4/dmc1Δ::KANMX4</i> <i>MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 1990.45/7B	<i>sae2Δ::NATMX4/sae2Δ::NATMX4 dmc1Δ::KANMX4/dmc1Δ::KANMX4</i> <i>MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 2438.91/20A	<i>sae2Δ::NATMX4::sae2-S267A::LEU2/sae2Δ::NATMX4::sae2-S267A::LEU2</i> <i>dmc1Δ::KANMX4/dmc1Δ::KANMX4 MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 2720.10/5B	<i>sae2Δ::NATMX4::sae2-S267D::LEU2/sae2Δ::NATMX4::sae2-S267D::LEU2</i> <i>dmc1Δ::KANMX4/dmc1Δ::KANMX4 MEK1-HA3::URA3/MEK1-HA3::URA3</i>	This study
YLL 1772.5/3C-16	<i>sae2Δ::NATMX4::SAE2::LEU2/sae2Δ::NATMX4::SAE2::LEU2 SPO11-MYC18::URA3/SPO11</i>	This study
YLL 2679.27/9C-18	<i>sae2Δ::NATMX4/sae2Δ::NATMX4 SPO11-MYC18::URA3/SPO11</i>	This study
YLL 2341/16A-28	<i>sae2Δ::NATMX4::sae2-S267A::LEU2/sae2Δ::NATMX4::sae2-S267A::LEU2</i> <i>SPO11-MYC18::URA3/SPO11</i>	This study
YLL 2340/5D-10	<i>sae2Δ::NATMX4::sae2-S267D::LEU2/sae2Δ::NATMX4::sae2-S267D::LEU2</i> <i>SPO11-MYC18::URA3/SPO11</i>	This study
YLL 2516.60/1D-8	<i>exo1Δ::HPH/exo1Δ::HPH pCLB2-SGS1::KANMX6/pCLB2-SGS1::KANMX6</i> <i>SPO11-MYC18::URA3/SPO11</i>	This study
YLL 2484.22/12D	<i>dmc1Δ::KANMX4/dmc1Δ::KANMX4</i>	This study
YLL 2485.62/5D	<i>dmc1Δ::KANMX4/dmc1Δ::KANMX4 exo1Δ::HPH/exo1Δ::HPH</i>	This study
YLL 2528.21/1D	<i>dmc1Δ::NATMX4/dmc1Δ::NATMX4 exo1Δ::HPH/exo1Δ::HPH</i> <i>pCLB2-SGS1::KANMX6/pCLB2-SGS1::KANMX6</i>	This study
YLL 2528.21/6D	<i>dmc1Δ::NATMX4/dmc1Δ::NATMX4 pCLB2-SGS1::KANMX6/pCLB2-SGS1::KANMX6</i>	This study
YLL 2656.2/15C	<i>dmc1Δ::NATMX4/dmc1Δ::NATMX4 pif1-M2::URA3/pif1-M2::URA3</i>	This study
YLL 2656.2/13D	<i>dmc1Δ::NATMX4/dmc1Δ::NATMX4 pif1-M2::URA3/pif1-M2::URA3</i> <i>dna2Δ::HPH/dna2Δ::HPH</i>	This study

YLL 1772/7D	<i>SAE2-HA3::URA3/SAE2</i>	This study
YLL 2400	<i>sae2Δ::NATMX4::sae2-S267A-HA3::URA3::LEU2/sae2Δ::NATMX4::sae2-S267A::LEU2</i>	This study
SKY 615.4-2	<i>cdc28-as/cdc28-as SAE2-HA3::URA3/SAE2</i>	This study
YLL 1772.5/3C	<i>sae2Δ::NATMX4::SAE2::LEU2/sae2Δ::NATMX4::SAE2::LEU2</i>	This study
YLL 2438.91/2A	<i>sae2Δ::NATMX4::sae2-S267A::LEU2/sae2Δ::NATMX4::sae2-S267A::LEU2</i>	This study
YLL 2340/5D	<i>sae2Δ::NATMX4::sae2-S267D::LEU2/sae2Δ::NATMX4::sae2-S267D::LEU2</i>	This study
YLL 2679.27/9C	<i>sae2Δ::NATMX4/sae2Δ::NATMX4</i>	This study
YLL 2547.6/2A	<i>sae2Δ::NATMX4::sae2-S134A::LEU2/sae2Δ::NATMX4::sae2-S134A::LEU2</i>	This study
YLL 2659.15/9C	<i>sae2Δ::NATMX4::sae2-S134D::LEU2/sae2Δ::NATMX4::sae2-S134D::LEU2</i>	This study
YLL 2522.71/25A	<i>sae2Δ::NATMX4::sae2-S267A S134A::LEU2/sae2Δ::NATMX4::sae2-S267A S134A::LEU2</i>	This study
YLL 2644.1/2B	<i>sae2Δ::NATMX4::sae2-S267A S134D::LEU2/sae2Δ::NATMX4::sae2-S267A S134D::LEU2</i>	This study
YLL 2519.50/8D	<i>sae2Δ::NATMX4::sae2-S267A S179A::LEU2/sae2Δ::NATMX4::sae2-S267A S179A::LEU2</i>	This study
