

Table S1 *Saccharomyces cerevisiae* strains used in this study, all of SK1 genetic background

Strain name	Strain #	Genotype	Source
WT	DAO23-1	<i>MAT a/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, TRP1/trp1::hisG</i>	This study
rev3D	DAO63	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, trp1::hisG/TRP1, lys2/lys2, rev3::kanMX4/rev3::kanMX4</i>	This study
rad30D	DAO36	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, TRP1/trp1::hisG, rad30::kanMX4/rad30::kanMX4</i>	This study
rev1D	DAO42	<i>MAT a/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/ leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, trp1::hisG/TRP1, lys2/lys2, rev1::kanMX4/rev1::kanMX4</i>	This study
rev7D	DAO29	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, TRP1/trp1::hisG, rev7::kanMX4/rev7::kanMX4</i>	This study
rev1Drad30D	DAO49	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/ leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, trp1::hisG/TRP1, lys2/lys2, rev1::kanMX4/rev1::kanMX4, rad30::kanMX4/rad30::kanMX4</i>	This study
rev3Drad30D	DAO80	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, lys2/lys2, TRP1/trp1::hisG, leu2::hisG/ leu2::hisG, his4-X::LEU2-ura3(T360G)/his4-B::LEU2, rev3::kanMX4/rev3::kanMX4, rad30::kanMX4/rad30::kanMX4</i>	This study
rev1Drev3D	DAO56	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/ leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, trp1::hisG/TRP1, lys2/lys2, rev1::kanMX4/rev1::kanMX4, rev3::kanMX4/rev3::kanMX4</i>	This study
rev1D rad30D rev3D	DAO82	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, lys2/lys2, trp1::hisG/trp1::hisG, leu2::hisG/ leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, rev1::kanMX4/rev1::kanMX4, rev3::kanMX4/rev3::kanMX4, rad30::kanMX4/rad30::kanMX4</i>	This study
Spo11D	DAO62	<i>MAT a/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ura3(PstI-SmaI)::hisG, leu2::hisG/leu2::hisG, his4-X::LEU2-ura3-T360G /his4-B::LEU2, TRP1/trp1::hisG, spo11::kanMX4/spo11::kanMX4</i>	This study
Rev1-Myc	DAO110	<i>MATa/MATa, ho::hisG/ ho::hisG, ura3(PstI-SmaI)::hisG/ ura3(PstI-SmaI)::hisG his4/his4 lys2/lys2, REV1-13myc:TRP1/ REV1-13myc:TRP1</i>	This study
Rev3-Myc	DAO119	<i>MATa/MATa, ho::hisG / ho::hisG, ura3(PstI-SmaI)::hisG/ ura3(PstI-SmaI)::hisG his4/his4 lys2/lys2, REV3-13myc::TRP1/ REV3-13myc:TRP1</i>	This study
Rev7-Myc	DAO16-1	<i>MATa/MATa, ho::hisG/ ho::LYS2 ura3/ura3 ade2/ADE2 his4-X::LEU2-BamH1/his4-B::LEU2 REV7-9myc::TRP1/ REV7-9myc::TRP1</i>	This study
Rev1-Myc	DAO137	<i>MATa/MATa, ho::hisG /ho::hisG, ura3(PstI-SmaI)::hisG/ ura3(PstI-SmaI)::hisG lys2/lys2 leu2/leu2 REV1-13myc::TRP1/ REV1-</i>	This study

Dmc1-HA		<i>13myc::TRP1 DMC1-3HA::kanMX4/DMC1-3HA:: kanMX4</i>	
Rev1-Myc Rad30-HA	DAO172	<i>MATa/MATa, ho::hisG/ho::hisG, ura3(PstI-SmaI)::hisG/ ura3(PstI-SmaI)::hisG URA3/URA3 lys2/lys2 his4-X::LEU2/ his4-B::LEU2 REV1-13myc::TRP1/REV1-13myc:TRP1 RAD30-3HA: kanMX4/ RAD30-3HA: kanMX4</i>	This study
Rev3-Myc Rad30-HA	DAO178	<i>MATa/MATa, ho::LYS2 / ho::hisG, his4-X::LEU2/his4-B::LEU2 ura3/ URA3 LYS2/lys2 REV3-13myc::TRP1/REV3-13myc::TRP1 RAD30-3HA::kanMX4/RAD30-3HA::kanMX4</i>	This study
Rev1-Myc Tid1-HA	DAO180	<i>MATa/MATa, ho::hisG / ho::hisG, ura3(PstI-SmaI)::hisG/ ura3(PstI-SmaI)::hisG lys2/lys2 his4-X::LEU2/his4-B::LEU2 REV1-13myc::TRP1/REV1-13myc::TRP1 TID1-3HA::kanMX4/ TID1-3HA::kanMX4</i>	This study
Rev1-Myc Ime2-HA	DAO212	<i>MATa/MATa, ho::LYS2/ho::hisG, ura3(PstI-SmaI)::hisG/ ura3(PstI-SmaI)::hisG trp1::hisG/ trp1::hisG leu2::hisG / leu2::hisG his4-B::LEU2/his4-X::LEU2 REV1-13myc::TRP1/REV1 IME2-3HA::KanMX/IME2</i>	This study
<i>ndt80D-a</i>	661	<i>MATa ho::LYS2 lys2 leu2::hisG trp1::hisG ndt80::kanMX4 LexA(op)-LacZ::URA3</i>	S. Keeney
<i>ndt80D-a</i>	662	<i>MATa ho::LYS2 lys2 leu2::hisG trp1::hisG ndt80::kanMX4 LexA(op)-LacZ::URA3</i>	S. Keeney