

S6 Table. Strains used in this study

	GENOTYPE
YAM1252	<i>lys2ΔNhe his4-260,519 leu2-3,112 MATα trp1-289 S.c. ZIP1 ura3-1 thr1-4 ade2-1</i> <i>lys2ΔNhe his4-260,519 leu2-3,112 MATα trp1-289 S.c. ZIP1 ura3-1 thr1-4 ade2-1</i>
CO9	<i>lys2ΔNhe his4-260,519 leu2-3,112 MATα trp1-289 K.l. ZIP1 ura3-1 thr1-4 ade2-1</i> <i>lys2ΔNhe his4-260,519 leu2-3,112 MATα trp1-289 K.l. ZIP1 ura3-1 thr1-4 ade2-1</i> YAM1252 with <i>K. lactis</i> ZIP1 ORF in place of the <i>S. cerevisiae</i> ZIP1 ORF on chromosome IV.
CO10	YAM1252 homozygous <i>zip1::URA3</i>
CO7	YAM1252 <i>S. cerevisiae</i> ZIP1/ <i>zip1::URA3</i>
CO11	YAM1252 <i>K.lactis</i> ZIP1/ <i>zip1::URA3</i>
CO33	YAM1252 <i>S. cerevisiae</i> ZIP1/ <i>K.lactis</i> ZIP1
AM2715	YAM1252 homozygous <i>pch2::TRP1</i>
AM3340	CO10 homozygous <i>pch2::hphMX4</i>
AM2713	CO11 homozygous <i>pch2::TRP1</i>
K292	YAM1252 <i>ndt80::LEU2 ECM11-cMYC::kanMX4 HIS4 hphMX4@CEN3 ADE2@RAD18</i> <i>ndt80::LEU2 ECM11 his4-260,519 CEN3 RAD18</i>
K268	CO9 homozygous <i>ndt80::LEU2</i> and <i>ECM11/ECM11-cMYC::kanMX4</i>
AM3356	CO9 <i>K.lactis</i> ZIP1-V5 (tagged between R472 S473)
AM2712	YAM1252 <i>ECM11-cMYC::kanMX4 ndt80::LEU2</i> <i>ECM11-cMYC::kanMX4 ndt80::LEU2</i>
AM2711	CO9 <i>ECM11-cMYC::kanMX4 ndt80::LEU2</i> <i>ECM11-cMYC::kanMX4 ndt80::LEU2</i>
AM2784	CO10 <i>ECM11-cMYC::kanMX4 ndt80::LEU2</i> <i>ECM11-cMYC::kanMX4 ndt80::LEU2</i>
K375	YAM1252 <i>ndt80::LEU2 ZIP3-cMYC HIS4 hphMX4@CEN3</i> <i>ndt80::LEU2 ZIP3 his4-260,519 CEN3</i>
YT12	CO9 homozygous <i>ndt80::LEU2</i> and <i>ZIP3/ZIP3-cMYC</i>
AM3362	YAM1252 <i>ZIP4-HA/ZIP4 ZIP3/ZIP3-cMYC</i>
AM3361	CO9 <i>ZIP4-HA/ZIP4 ZIP3/ZIP3-cMYC</i>
AM3363	CO10 <i>ZIP4-HA/ZIP4 ZIP3/ZIP3-cMYC ndt80::LEU2/NDT80</i>
CO58	CO9 homozygous <i>CTF19-cMYC::kanMX4</i>
YT14	CO9 homozygous <i>spo11::ADE2 CTF19-cMYC::kanMX4</i>
YT15	YAM1252 homozygous <i>spo11::ADE2 CTF19-cMYC::kanMX4</i>
YT21	CO10 homozygous <i>spo11::ADE2 CTF19-cMYC::kanMX4</i>
YT24	<i>lys2ΔNhe his4-260,519 leu2-3,112 MATα trp1-289 ura3-1 spo11::ADE2</i> <i>MATα@THR1 ade2-1 CTF19-cMYC::kanMX4</i>
YT23	YT24 <i>K.lactis</i> ZIP1

YT25	YT24 <i>zip1::URA3</i>
YAM538	YT24 <i>SPO11</i>
AM2840	YT23 <i>SPO11</i>
AM2841	YAM538 <i>zip1::LYS2</i>
K530	YAM1252 <u><i>HIS4</i></u> <u><i>leu2-Cla</i></u> <u><i>hphMX4@CEN3 MATa</i></u> <i>his4-260,519 leu2-3,112 CEN3 MATa</i> <u><i>CEN8</i></u> <u><i>spo13::URA3</i></u> <u><i>arg4-BglII</i></u> <u><i>thr1-4</i></u> <i>TRP1@CEN8 SPO13 arg4-Nsp THR1</i>
K531	K530 homozygous <i>K.lactis ZIP1</i>
K533	K530 homozygous <i>zip1::URA3</i>
YT131	<u><i>HIS4</i></u> <u><i>leu2-3,112</i></u> <u><i>hphMX4@CEN3 MATa</i></u> <u><i>ADE2@RAD18</i></u> <u><i>natMX4@HMR</i></u> <u><i>trp1-289</i></u> <i>his4-260,519 leu2-3,112 CEN3 MATa RAD18 HMR trp1-289</i> <u><i>ura3-1</i></u> <u><i>SPO11</i></u> <u><i>spo13::URA3</i></u> <u><i>thr1-4</i></u> <u><i>LEU2@ChrmXI 152kb</i></u> <u><i>192kb</i></u> <u><i>ade2-1</i></u> <i>ura3-1 TRP1MX4@SPO11 SPO13 thr1-4 152kb THR1@193kb ade2-1</i>
YT125	YT131 homozygous <i>K.lactis ZIP1</i>
AM3313	YT131 homozygous <i>msh4::ADE2</i>
YT152	YT131 homozygous <i>K.lactis ZIP1 msh4::ADE2</i>
K479	YAM1252 <u><i>HIS4</i></u> <u><i>leu2-CUP1</i></u> <u><i>TRP1@CEN3 MATa</i></u> <u><i>cup1</i></u> <i>his4-260,519 leu2-3,112 CEN3 MATa CUP1</i> <i>MATa-bearing chromosome III is circular</i>
K457	K479 homozygous <i>K.lactis ZIP1</i>
TY521	K479 homozygous <i>zip1::LEU2</i>
K536	K479 homozygous <i>mms4::natMX4</i>
K521	K457 homozygous <i>mms4::natMX4</i>
K537	K479 <i>zip1::LEU2/zip1::URA3</i> homozygous <i>mms4::natMX4</i>
K542	K479 homozygous <i>yen1::hphMX4</i>
K545	K457 homozygous <i>yen1::hphMX4</i>
K548	K479 <i>zip1::LEU2/zip1::URA3</i> homozygous <i>yen1::hphMX4</i>
K573	K479 homozygous <i>zip3::hphMX4</i>
K576	K457 <i>zip3::hphMX4/zip3::kanMX4</i>
K579	K479 <i>zip1::LEU2/zip1::URA3</i> homozygous <i>zip3::hphMX4</i>
TY261	K479 homozygous <i>zip4::kanMX4</i>
K458	K457 homozygous <i>zip4::kanMX4</i>
TY522	TY521 homozygous <i>zip4::kanMX4</i>

K582	K479 homozygous <i>spo16::hphMX4</i>
K585	K457 homozygous <i>spo16::hphMX4</i>
K588	K479 <i>zip1::LEU2/zip1::URA3</i> homozygous <i>spo16::hphMX4</i>
K459	K479 homozygous <i>msh4::ADE2</i>
K486	K457 homozygous <i>msh4::ADE2</i>
K538	K479 homozygous <i>zip1::URA3 msh4::ADE2</i>
K551	K479 homozygous <i>mlh3::hphMX4</i>
K554	K457 homozygous <i>mlh3::hphMX4</i>
K557	K479 <i>zip1::LEU2/zip1::URA3</i> homozygous <i>mlh3::hphMX4</i>
K487	K479 homozygous <i>zip4::kanMX4 msh4::ADE2</i>
K488	K457 homozygous <i>zip4::kanMX4 msh4::ADE2</i>
K491	K479 homozygous <i>zip1::LEU2 zip4::kanMX4 msh4::ADE2</i>
K523	K479 homozygous <i>mms4::natMX4 msh4::ADE2</i>
K524	K457 homozygous <i>mms4::natMX4 msh4::ADE2</i>
K525	K479 homozygous <i>zip1::URA3 mms4::natMX4 msh4::ADE2</i>
K618	K479 homozygous <i>zip4::kanMX4 mlh3::hphMX4</i>
K621	K457 homozygous <i>zip4::kanMX4 mlh3::hphMX4</i>
K624	K479 homozygous <i>zip1::LEU2 zip4::kanMX4 mlh3::hphMX4</i>
AM3411	CO9 homozygous <i>msh4::ADE2 MSH4-HA@URA3 ndt80::LEU2 ZIP3-MYC/ZIP3</i>
AM3412	YAM1252 homozygous <i>msh4::ADE2 MSH4-HA@URA3 ndt80::LEU2 ZIP3-MYC/ZIP3</i>
AM3413	CO10 homozygous <i>msh4::ADE2 MSH4-HA@URA3 ndt80::LEU2 ZIP3-MYC/ZIP3</i>
K663	K479 homozygous <i>ndt80::hphMX4</i>
K666	K457 homozygous <i>ndt80::hphMX4</i>
K669	K479 <i>zip1::LEU2/zip1::URA3</i> homozygous <i>ndt80::hphMX4</i>
K672	K459 homozygous <i>ndt80::hphMX4</i>
K675	K486 homozygous <i>ndt80::hphMX4</i>
K678	K538 homozygous <i>ndt80::hphMX4</i>