

Table S1 - Strain list**Strain list**

MATa ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

MATalpha ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

tem1-3

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

cdc15-1

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

dbf2-2 dbf20::HYG

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

nud1-44

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

kar9::kanMx4

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

dhc1::HIS3

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

tem1-3 kar9::kanMx4

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

tem1-3 dhc1::HIS3

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

cdc15-1 kar9::kanMx4

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

cdc15-1 dhc1::HIS3

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

dbf2-2 dbf20::HYG kar9::kanMx4

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

dbf2-2 dbf20::HYG dhc1::HIS3

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

nud1-44 kar9::kanMx4

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

nud1-44 dhc1::HIS3

ade2-101 ura3-52 lys2-801 his3-Δ200 trp1-Δ63 leu2

kar9::kanMx4 ura3::CFP-TUB1:URA3

ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

dhc1::HIS3 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

kar9::KAR9-S197A S496A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

tem1-3 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

cdc15-1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

dbf2-2 dbf20::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

nud1-44 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

cdc14-1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

cdc14-3 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

clb4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

lte1::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

kin4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

tem1-3 clb4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

nud1-44 clb4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

kar9::KAR9-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

kar9::KAR9-4R-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

tem1-3 kar9::KAR9-4R-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

nud1-44 kar9::KAR9-4R-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

*siz1::LEU2 siz2::TRP1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*tem1-3 siz1::LEU2 siz2::TRP1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*nud1-44 siz1::LEU2 siz2::TRP1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*mad2::hphNT1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*nnf1-17 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*mad2::hphNT1 nnf1-17 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*mad2::hphNT1 tem1-3 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*mad2::hphNT1 cdc15-1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*mad2::hphNT1 dbf2-2 dbf20::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*mad2::hphNT1 nud1-44 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-R194A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-R200A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-R194A S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-S197A S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-TAP:HIS3 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*clb4::natNT2 kar9::KAR9-TAP:HIS3 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2-2 dbf20::kanMx4 kar9::KAR9-TAP:HIS3 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*clb4::natNT2 dbf2-2 dbf20::kanMx4 kar9::KAR9-TAP:HIS3 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-TAP:LEU2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-S197A-TAP:LEU2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-S332A S429A-TAP:LEU2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*kar9::KAR9-S197A S332A S429A-TAP:LEU2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*clb4::kanMx4 kar9::KAR9-R194A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2::hphNT1 kar9::KAR9-R194A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2::hphNT1 clb4::kanMx4 kar9::KAR9-R194A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*clb4::kanMx4 kar9::KAR9-S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2::hphNT1 kar9::KAR9-S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2::hphNT1 clb4::kanMx4 kar9::KAR9-S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*clb4::kanMx4 kar9::KAR9-R200A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2::hphNT1 kar9::KAR9-R200A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*dbf2::hphNT1 clb4::kanMx4 kar9::KAR9-R200A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::kanMx4 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
dhc1::HIS3 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
bub2::KAN kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
bfa1::KAN kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
tem1-3 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
cdc15-1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
dbf2-2 dbf20::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
nud1-44 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
cdc14-1 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-4R-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
tem1-3 kar9::KAR9-4R-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
nud1-44 kar9::KAR9-4R-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
clb4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
tem1-3 clb4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

*spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
nud1-44 clb4::kanMx4 kar9::KAR9-YFP:natNT2 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2*

spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-R194A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-R200A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-R194A S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2

spc42::SPC42-LoxP-mCherry:kanMx4-LoxP-GFP:HIS3 leu2::gdp:Cre-EBD78:LEU2
kar9::KAR9-S197A S332A S429A-YFP:TRP1 ura3::CFP-TUB1:URA3
ade2-101 lys2-801 his3-Δ200 trp1-Δ63 leu2