APPENDIX

Spo13/MEIKIN Ensures a Two-Division Meiosis by Preventing the Activation of APC/C^{Ama1} at Meiosis I

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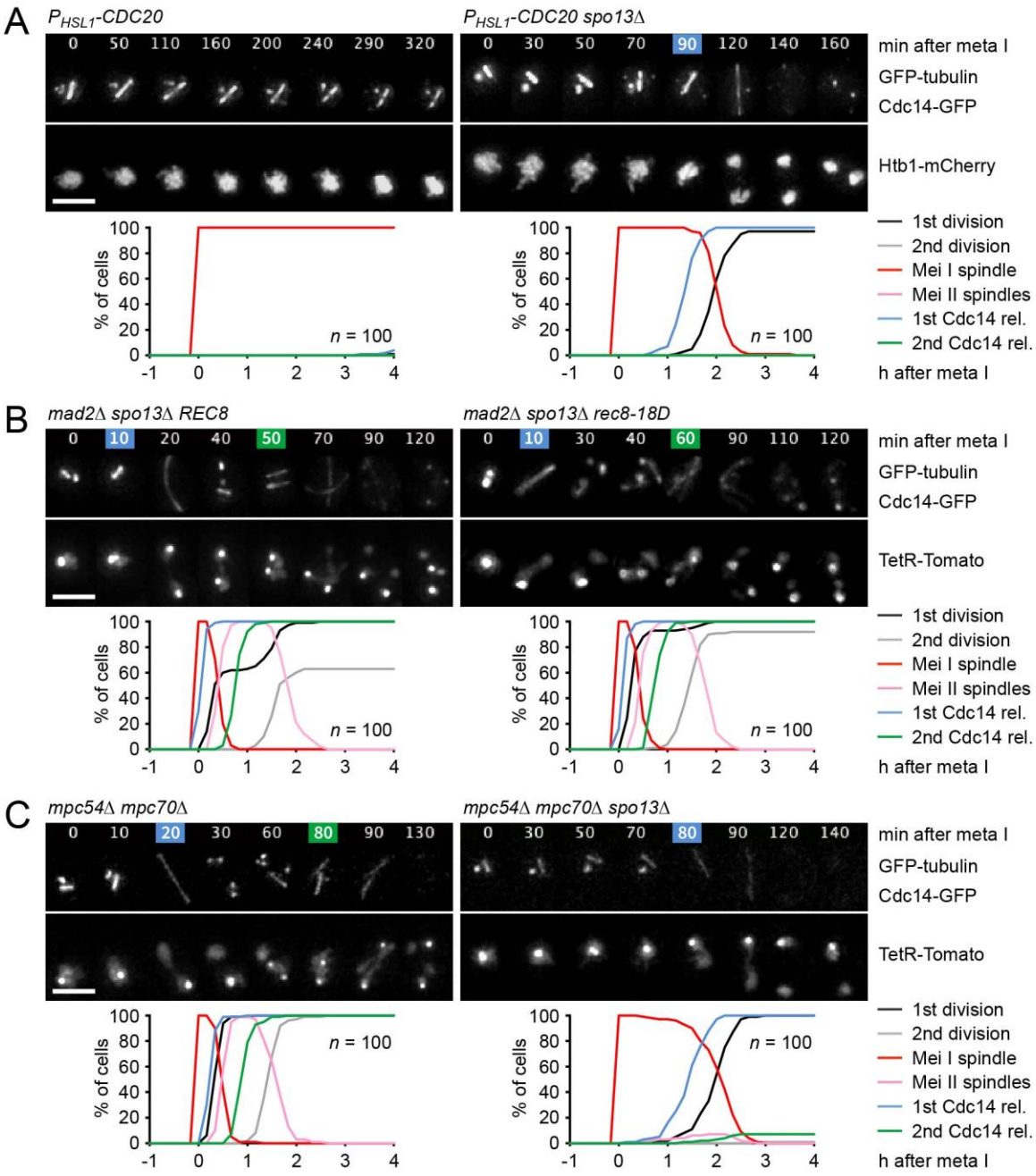
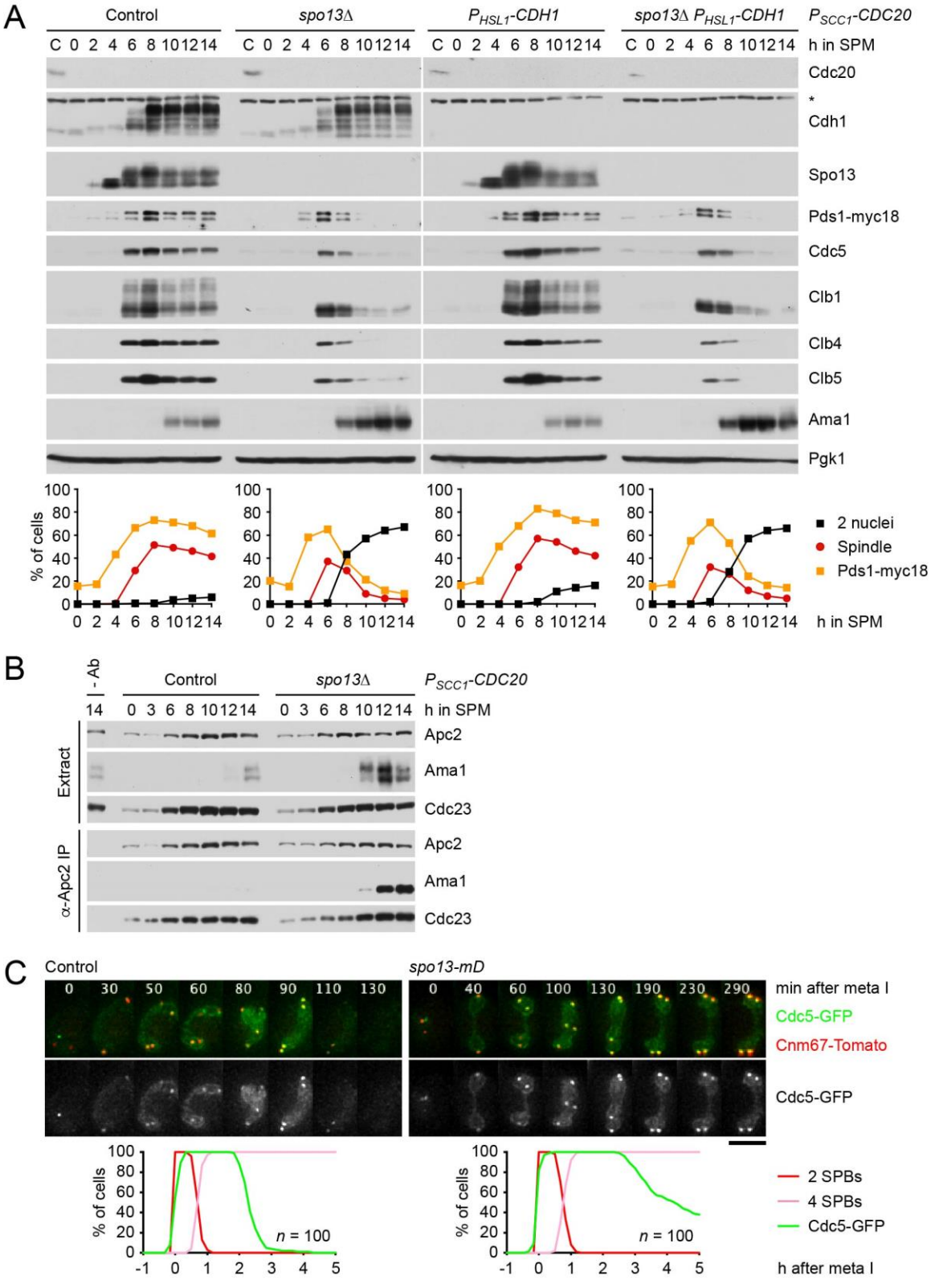


Appendix Figure S1. Analysis of nuclear division in *spo13Δ* mutants.
A-C. Imaging of spindles (GFP-tubulin), nucleolar release of Cdc14-GFP, and nuclear division (Htb1-mCherry or TetR-Tomato). TetR-Tomato labels the nucleoplasm (diffuse signal) and the centromeres of one copy of chromosome V (dots). Top, time-lapse series. First (blue) and second (green) Cdc14 release are marked. Bottom, meiotic events quantified in cells synchronized *in silico* to spindle formation at metaphase I (t = 0). (**A**) Deletion of *SPO13* causes Cdc14 release and nuclear division in Cdc20-depleted cells (P_{HSL1}-*CDC20*). (**B**) The *rec8-18D* mutation restores nuclear division at meiosis I in *mad2Δ spo13Δ* cells. (**C**) Blocking spore formation does not restore a second division in *spo13Δ* cells. Spore formation was prevented by deleting *MPC54* and *MPC70*, which encode meiotic plaque components (Knop & Strasser, 2000).
Data information: (A) is representative of two independent experiments. Scale bar, 4 μm.



Appendix Figure S2.

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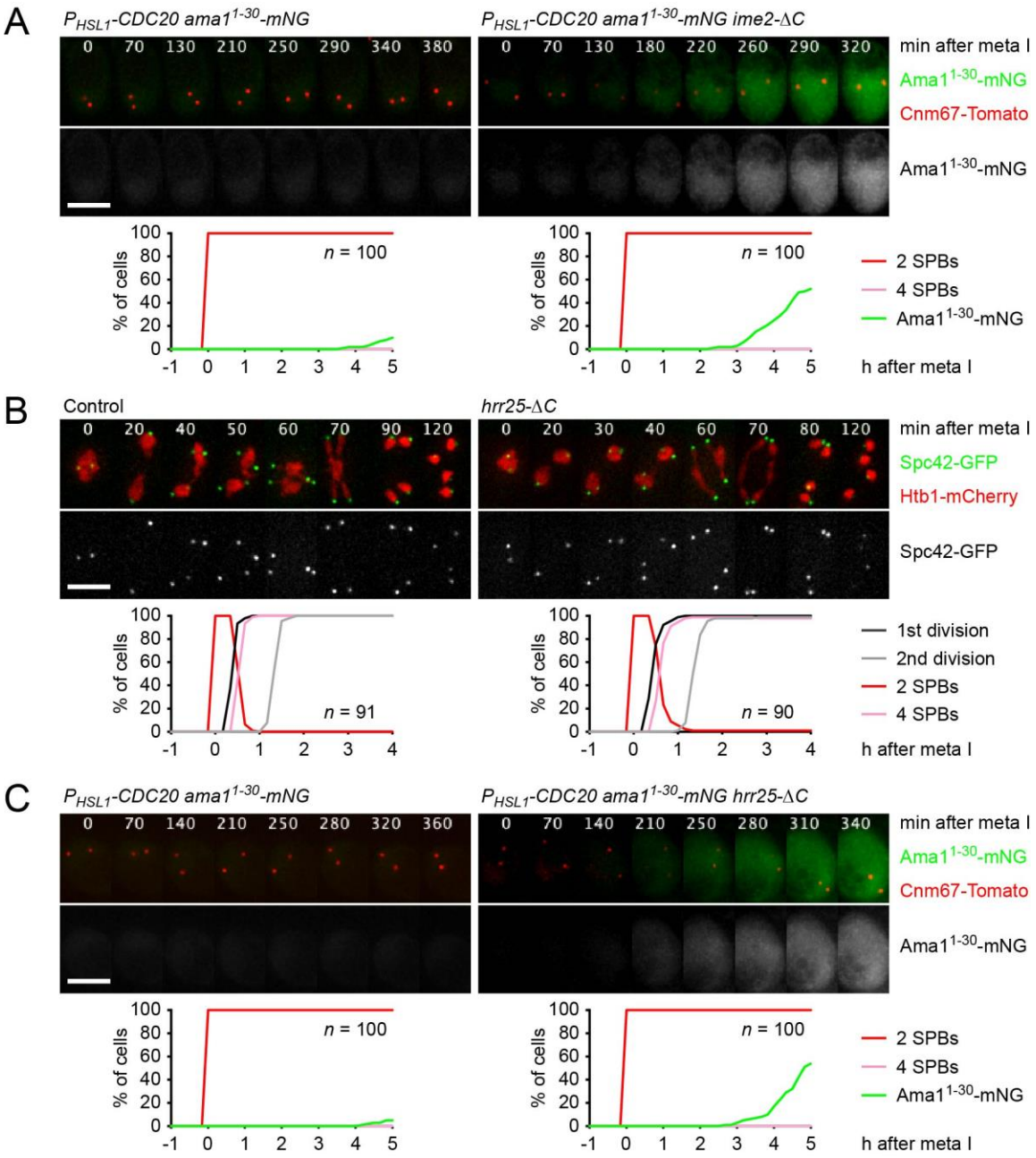
Appendix Figure S2. Ama1 but not Cdh1 activates the APC/C at metaphase I in *spo13Δ* cells.

A. Cdh1 is dispensable for the degradation of APC/C substrates and nuclear division in P_{SCC1}-*CDC20 spo13Δ* cells. Samples were collected from P_{SCC1}-*CDC20* cells carrying the mutations *spo13Δ* and/or P_{HSL1}-*CDH1*. Top, immunoblot detection of proteins. C, sample from proliferating cells. Asterisk, nonspecific band. Bottom, progression of meiosis quantified in fixed cells.

B. Analysis of protein extracts from P_{SCC1}-*CDC20* cells showing that deletion of *SPO13* causes accumulation and binding to the APC/C of Ama1. APC/C was immunoprecipitated with α-Apc2 antibodies. -Ab, a sample from control cells processed without α-Apc2 antibodies.

C. Imaging of Cdc5-GFP and SPBs (Cnm67-Tomato) in control and *spo13-mD* cells. Top, time-lapse series. Bottom, the presence of Cdc5 and SPB reduplication quantified in cells synchronized *in silico* to SPB separation at metaphase I (t = 0). Spo13-mD delays Cdc5 degradation by 200 min (95% CI, 163-236 min; $P < 0.0001$, Welch's t-test).

Data information: (C) is representative of three independent experiments. Scale bar, 4 μm.



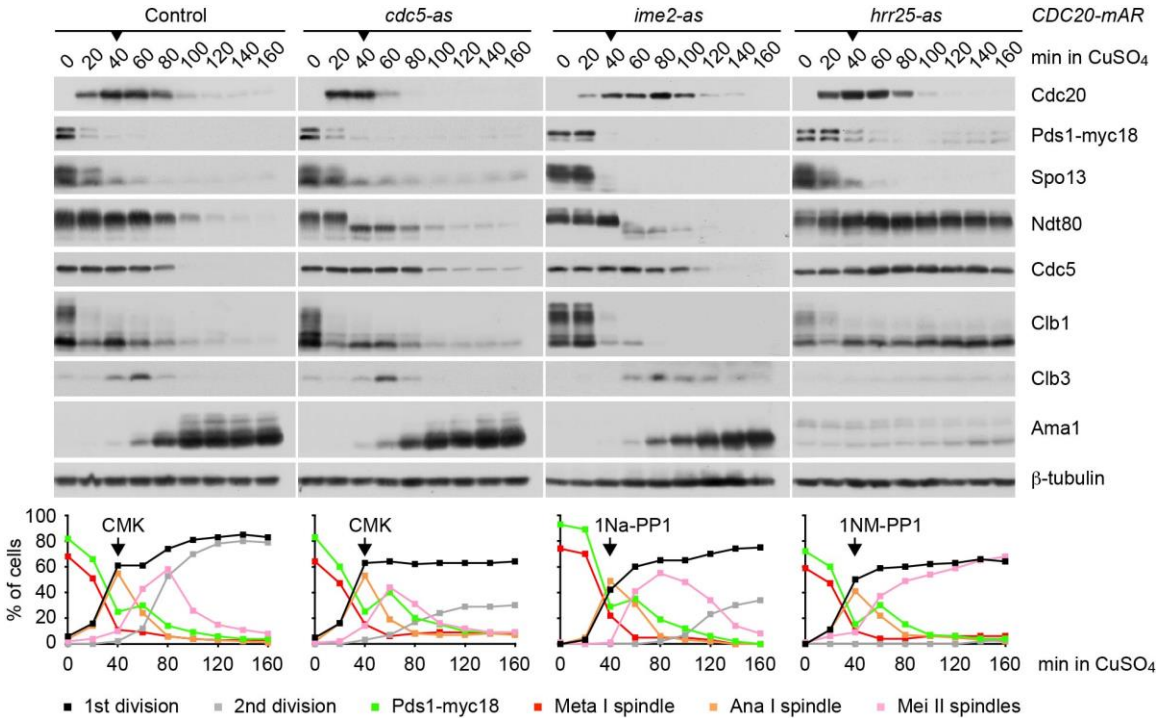
Appendix Figure S3. Analysis of hyperactive Ime2 and Hrr25.

A. Ime2-ΔC induces accumulation of mNG in *P_{HSL1}-CDC20* cells carrying *ama1$^{1-30}$-mNG* in place of *AMA1*. Top, time-lapse series from the imaging of mNG and SPBs (Cnm67-Tomato). Bottom, the presence of mNG quantified in cells synchronized *in silico* to SPB separation at metaphase I (t = 0).

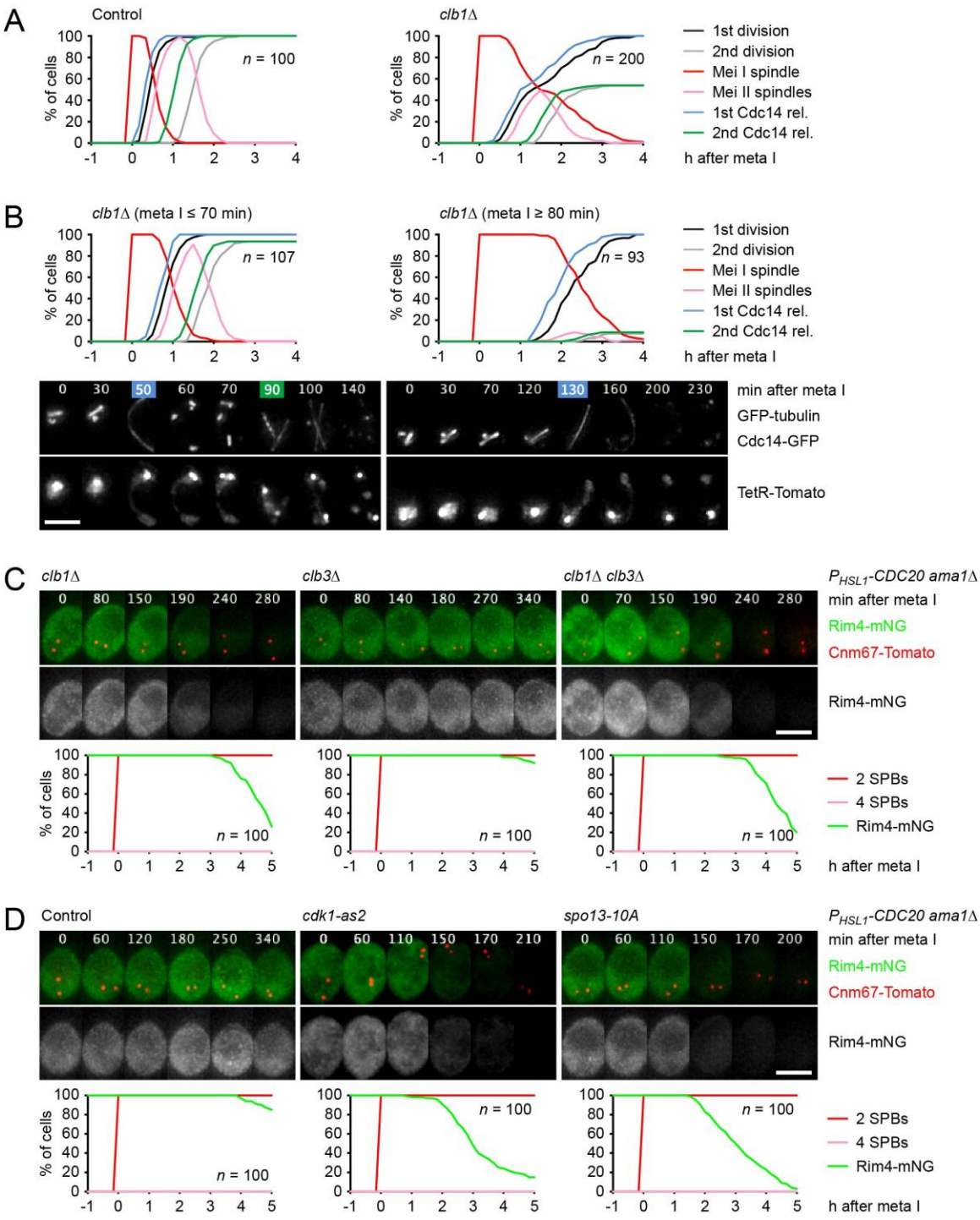
B. Imaging of SPBs (Spc42-GFP) and nuclei (Htb1-mCherry) in control and *hrr25-ΔC* cells. Top, time-lapse series. Bottom, quantification of SPB reduplication and nuclear division in cells synchronized *in silico* to SPB separation at metaphase I (t = 0).

C. Hrr25-ΔC induces accumulation of mNG in *P_{HSL1}-CDC20* cells carrying *ama1$^{1-30}$-mNG* in place of *AMA1*. Top, time-lapse series from the imaging of mNG and SPBs (Cnm67-Tomato). Bottom, the presence of mNG quantified in cells synchronized *in silico* to SPB separation at metaphase I (t = 0).

Data information: Data are representative of two (A and B) or three (C) independent experiments. Scale bar, 4 μm.



Appendix Figure S4. Inhibition of Cdc5, Ime2, and Hrr25 activity at meiosis II.
CDC20-mAR strains were released from the metaphase I-arrest with $CuSO_4$ at 8 h in SPM (t = 0). Cdc5-as, Ime2-as, or Hrr25-as was inhibited with the indicated ATP-analogue at anaphase I (t = 40 min, arrows). Top, immunoblot detection of proteins. Bottom, meiotic events quantified in fixed cells. While inhibition of Hrr25 at anaphase I blocks accumulation of Ama1 and Clb3 at meiosis II, inhibition of Cdc5 or Ime2 has no such effect.



Appendix Figure S5.

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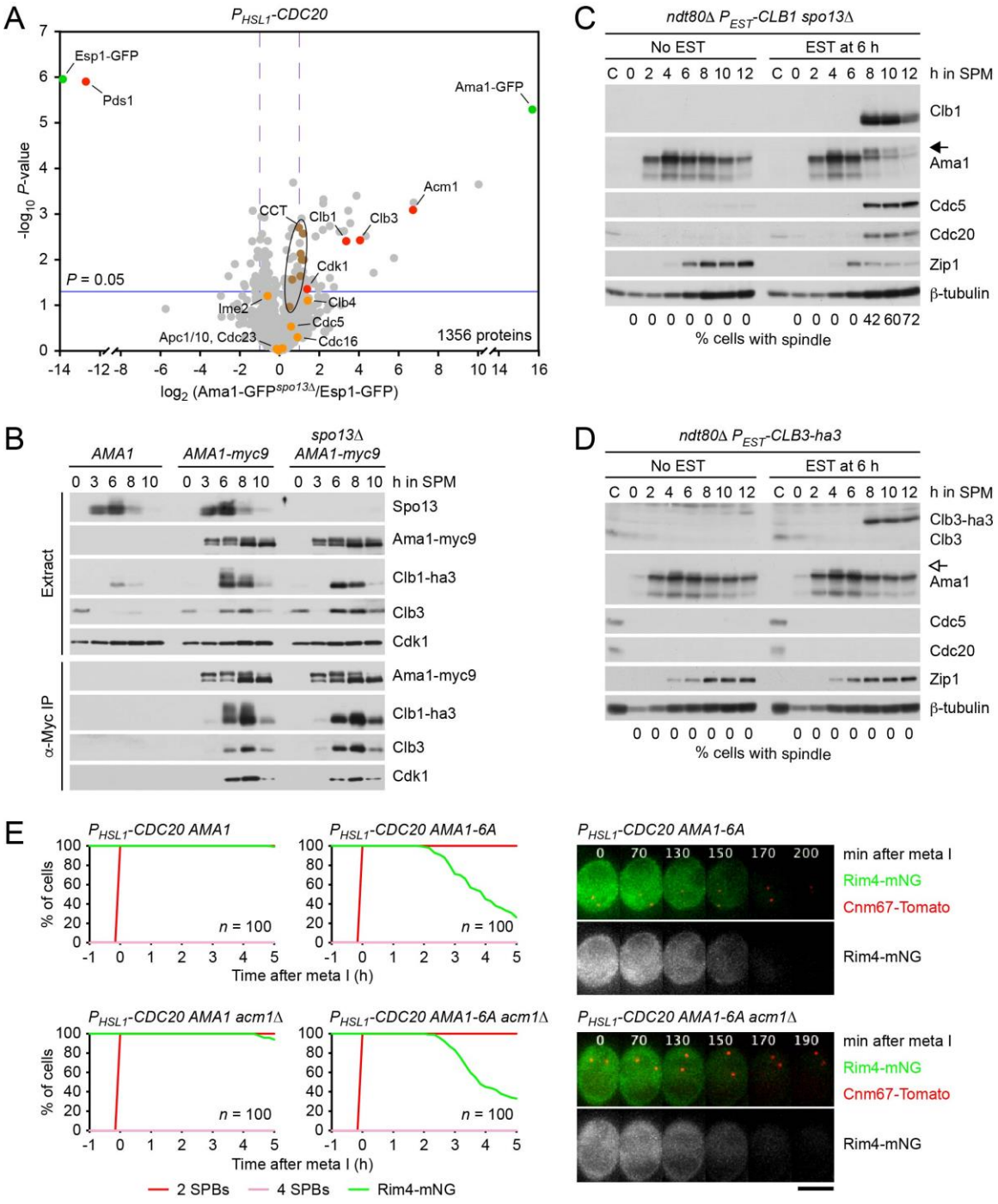
Appendix Figure S5. Analysis of cells lacking Clb1 or Cdk1 activity.

A, B. Analysis of meiosis in control and *clb1Δ* cells by imaging of spindles (GFP-tubulin), nucleolar release of Cdc14-GFP, and TetR-Tomato, which labels the nucleoplasm (diffuse signal) and the centromeres of one copy of chromosome V (dots). (**A**) Meiotic events quantified in control and *clb1Δ* cells synchronized *in silico* to spindle formation at metaphase I ($t = 0$). Metaphase I lasts 25 ± 10 min in control and 81 ± 44 min in *clb1Δ* cells ($P < 0.0001$, Welch's *t*-test). (**B**) Top, *clb1Δ* cells from (A) were separated into cells with a short (≤ 70 min, left) or a long metaphase I (≥ 80 min, right). Bottom, time-lapse series of *clb1Δ* cells with a short (50 min) and a long metaphase I (130 min). First (blue) and second (green) Cdc14 release are marked.

C, D. Imaging of Rim4-mNG and SPBs (Cnm67-Tomato) in metaphase I-arrested P_{HSL1}-*CDC20 ama1Δ* cells. Top, time-lapse series. Bottom, the presence of Rim4-mNG quantified in cells synchronized *in silico* to SPB separation at metaphase I ($t = 0$). (**C**) Deletion of *CLB1* causes Rim4 degradation, while deletion of *CLB3* has no effect, even in *clb1Δ* cells ($P = 0.73$, Welch's *t*-test). (**D**) Inhibition of Cdk1 and the *spo13-10A* mutation cause Rim4 degradation. Cdk1-as2 was inhibited with 1Na-PP1 at 7 h in SPM.

Data information: Data are representative of two (A-C) or three (D) independent experiments. Scale bar, 4 μm.



Appendix Figure S6.

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Appendix Figure S6. Analysis of proteins interacting with Ama1.

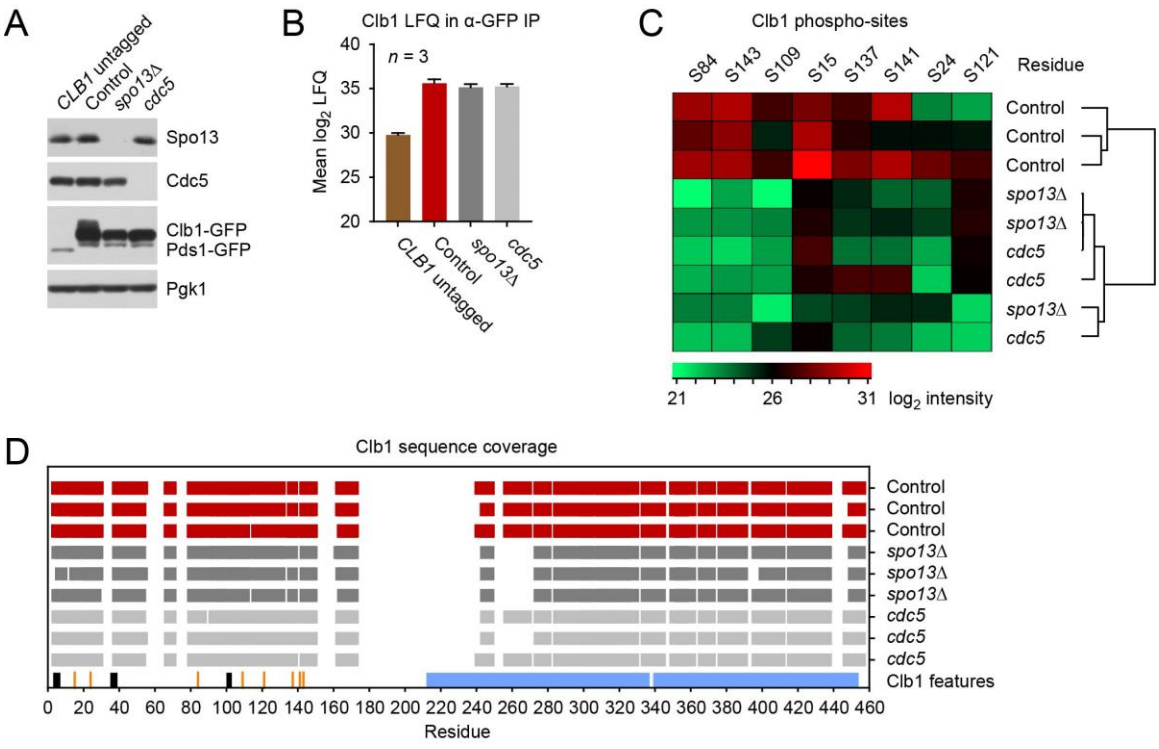
A. Identification of proteins copurifying with Ama1-GFP from metaphase I-arrested P_{HSL1}-*CDC20 spo13Δ* cells (8 h in SPM). Esp1-GFP from P_{HSL1}-*CDC20* cells served as negative control. Proteins digested with trypsin and Lys-C were analysed by LC-MS/MS. -$\log_{10}$-transformed *P*-values and mean $\log_2$-transformed label-free quantifications of co-purifying proteins were obtained from MaxQuant and displayed as a volcano plot. Baits (green), selected proteins with $P < 0.05$ (red) or $P > 0.05$ (orange), and the eight subunits of the CCT chaperonin (brown) are labelled. CCT is known to encapsulate and fold APC/C activators (Camasses et al., 2003). Only a subset of APC/C subunits is marked. Note that Ama1-GFP cannot bind the APC/C.

B. Clb1, Clb3, and Cdk1 bind to Ama1-myc9 immunoprecipitated with α-Myc antibodies from protein extracts of control and *spo13Δ* cells.

C, D. Immunoblot detection of proteins in *ndt80Δ* cells expressing Clb1 or Clb3-ha3 from an estradiol-inducible promoter at 6 h in SPM. The presence of a spindle was scored in fixed cells. (**C**) Clb1 inhibits Ama1-dependent proteolysis not only in *ndt80Δ* cells (Okaz et al., 2012) but also in *ndt80Δ spo13Δ* cells, resulting in the accumulation of Cdc5 and Cdc20 due to stabilization of the mitotic transcription factor Ndd1. Cdc5 activity induces degradation of Zip1. The arrow marks a Clb1- and Cdk1-dependent modification of Ama1. (**D**) Clb3 expression in *ndt80Δ* cells does not affect Ama1 modification (open arrow) or Ama1-dependent proteolysis.

E. Imaging of Rim4-mNG and SPBs (Cnm67-Tomato) in P_{HSL1}-*CDC20* cells carrying *AMA1-6A* and/or *acm1Δ*. Left, the presence of Rim4-mNG quantified in cells synchronized *in silico* to SPB separation at metaphase I ($t = 0$). P_{HSL1}-*CDC20 AMA1-6A* cells carrying *ACM1* or *acm1Δ* degrade Rim4 with similar timing ($P = 0.31$, Welch's *t*-test). Right, time-lapse series.

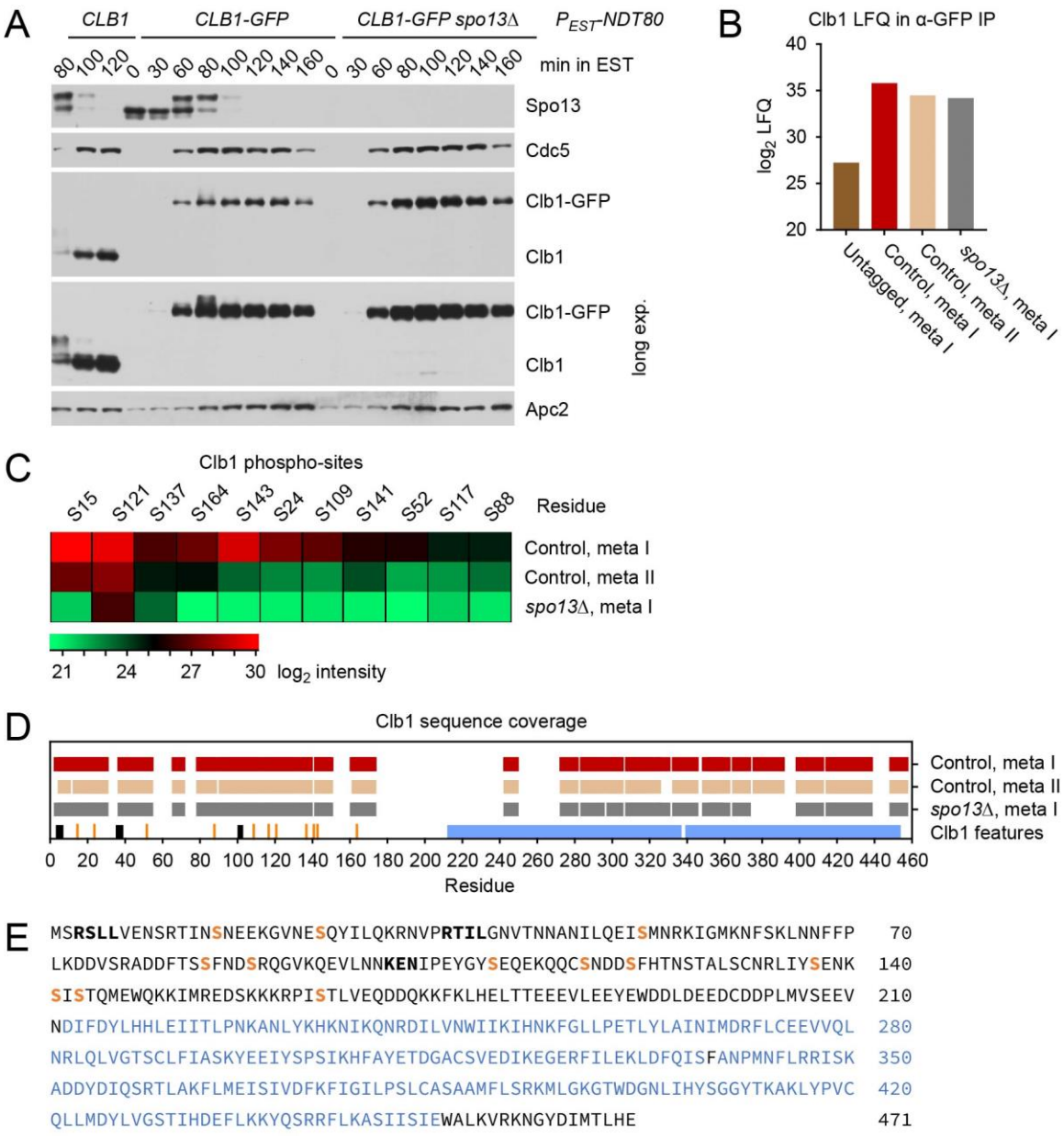
Data information: (A) Ama1-GFP purified from P_{HSL1}-*CDC20 spo13Δ* cells was analysed together with Ama1-GFP and Esp1-GFP from P_{HSL1}-*CDC20* cells (Fig EV4D). Data are based on α-GFP purifications from three independent cultures per strain. (E) is representative of two independent experiments. Scale bar, 4 μm.



Appendix Figure S7. Identification of Clb1 phosphorylation sites in metaphase I-arrested cells.

A-D. Extracts for α-GFP immuno-purification were prepared from metaphase I-arrested *P_{SCC1}-CDC20 ama1Δ CLB1-GFP* control cells and cells carrying *spo13Δ* or *P_{SCC1}-CDC5* (*cdc5*). *P_{SCC1}-CDC20 ama1Δ PDS1-GFP* cells provided extracts containing untagged Clb1. Eluted proteins were digested with trypsin and Lys-C and subjected to LC-MS/MS. Data were analysed in MaxQuant. (**A**) Immunoblot detection of proteins in extracts from metaphase I-arrested cells (8 h in SPM). (**B**) Mean $\log_2$-transformed label-free quantification (LFQ) of Clb1 from three independent purifications per strain. Error bars represent S.D. (**C**) Heatmap and hierarchical clustering of mean $\log_2$-transformed intensities of Clb1 phosphorylation sites. (**D**) Sequence coverage of Clb1 from the indicated strains. D- and KEN-boxes (black), phospho-serines (orange), and cyclin boxes (blue) are labelled.

Data information: Data are based on α-GFP purifications from three independent cultures per strain.

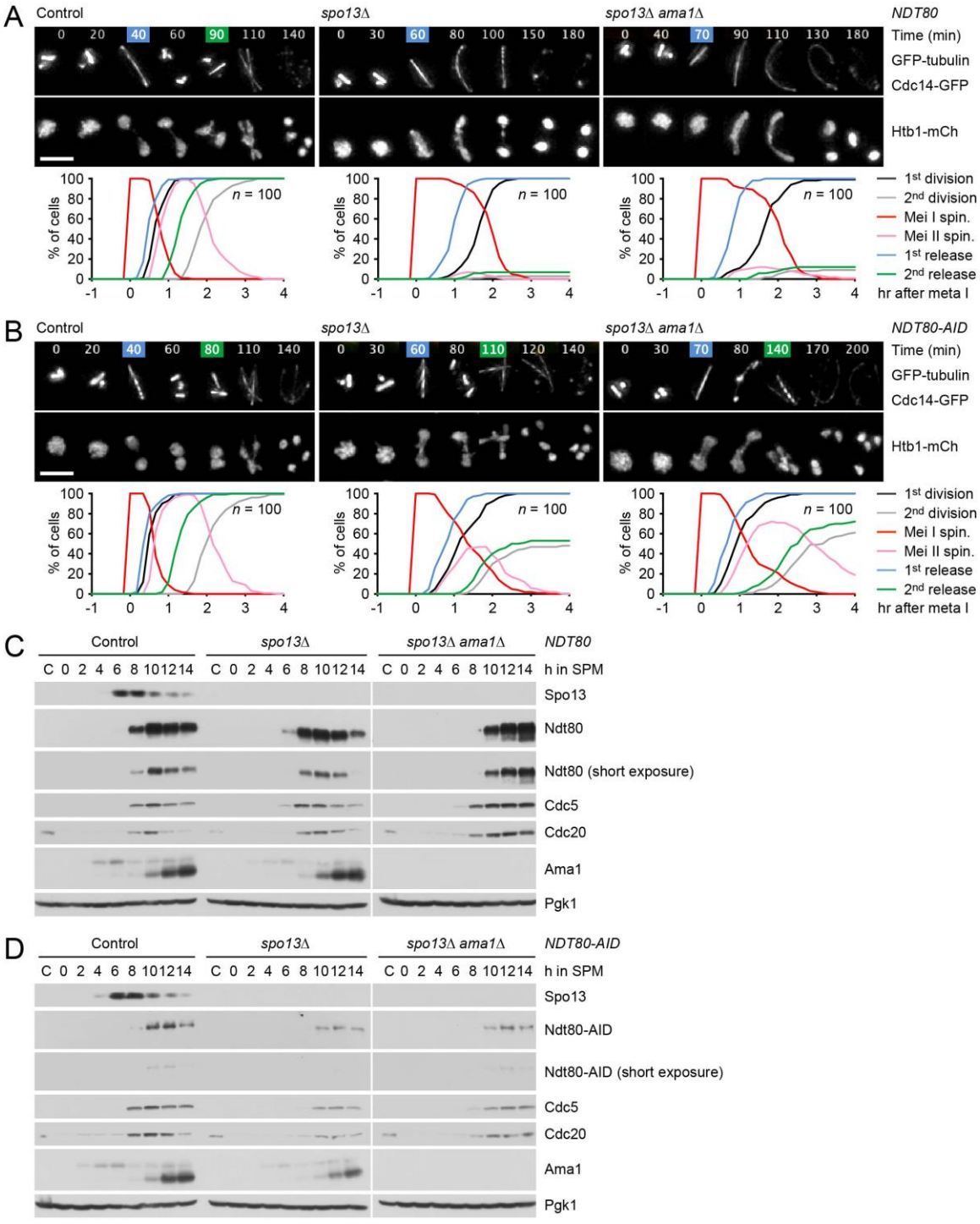


Appendix Figure S8. Clb1 phosphorylation sites in cells progression through meiosis.

A-D. Extracts for α-GFP immuno-purification were prepared from *P_{EST}-NDT80 CLB1-GFP* control cells released from the prophase arrest for 80 min (metaphase I) or 120 min (metaphase II) and from cells carrying *spo13Δ* released for 80 min (metaphase I). *P_{EST}-NDT80* cells provided extracts containing untagged Clb1. Eluted proteins were digested with trypsin and Lys-C and subjected to LC-MS/MS followed by data analysis in MaxQuant. (**A**) Immunoblot detection of proteins in cells released from the prophase arrest with estradiol (t = 0). Overexposure of Clb1 reveals a Spo13-dependent phosphorylation shift at t = 80 min. (**B**) log_2-transformed LFQs of Clb1 in the indicated samples. (**C**) Heatmap of log_2-transformed intensities of Clb1 phosphorylation sites. (**D**) Sequence coverage of Clb1 from the indicated samples. D- and KEN-boxes (black), phospho-serines (orange), and cyclin boxes (blue) are labelled.

E. Clb1 amino acid sequence. D- and KEN-boxes (bold), phosphorylation sites (orange), and the cyclin-box domain (blue) are labelled.

Data information: Data in (A-D) are based on α-GFP purifications from one culture per strain.



Appendix Figure S9.

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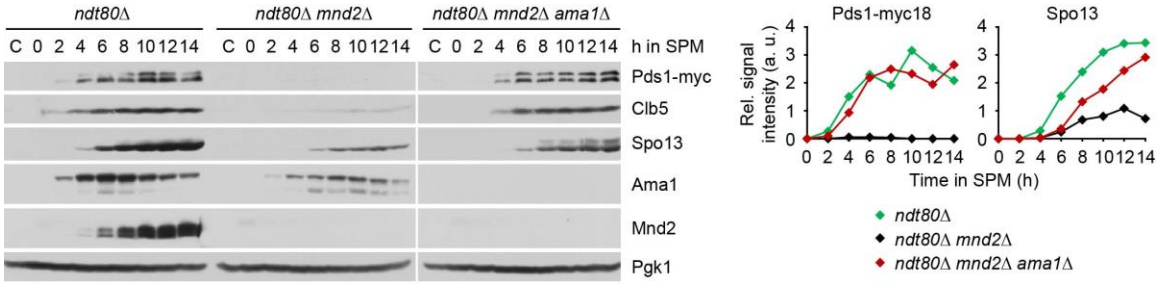
Appendix Figure S9. Restoring a two-division meiosis in *spo13Δ* mutants.

A, B. Meiosis in control, *spo13Δ*, and *spo13Δ ama1Δ* strains carrying wild-type *NDT80* or *NDT80-AID*. Top, time-lapse series from the imaging of spindles (GFP-tubulin), nucleolar release of Cdc14-GFP, and nuclear division (Htb1-mCherry). First (blue) and second (green) Cdc14 release are marked. Bottom, meiotic events quantified in cells synchronized *in silico* to spindle formation at metaphase I (t = 0). (**A**) *spo13Δ ama1Δ* cells undergo only one division, similar to *spo13Δ* single mutants (P = 0.13). (**B**) Ndt80-AID causes *spo13Δ* and *spo13Δ ama1Δ* cells to undergo two rounds of spindle formation, Cdc14 release, and nuclear division (P < 0.0001). Note that cells do not contain *OsTIR1*.

C, D. Protein extracts of *NDT80* and *NDT80-AID* strains from (A) and (B) were analysed by immunoblotting. (**C**) Deletion of *AMA1* causes accumulation of Ndt80, Cdc5, and Cdc20 in *spo13Δ* cells. (**D**) *NDT80-AID* strains produce low levels of Ndt80, Cdc5, and Cdc20.

Data information: *NDT80* and *NDT80-AID* strains were cultured and analysed together. The incidence of nuclear division was compared using Fisher's exact test. (A) is representative of two independent experiments. Scale bar, 4 μm.



Appendix Figure S10. Mnd2 is required for normal levels of Spo13 at prophase.

Left, immunoblot analysis of protein levels at prophase in *ndt80Δ* control cells and *ndt80Δ* cells carrying *mnd2Δ* or *mnd2Δ* plus *ama1Δ*. Right, relative signal intensities of Pds1-myc18 and Spo13.

Appendix Table S1. ***Saccharomyces cerevisiae*** **SK1 Strains Used in this Study**

Figure	Strain[1]	Genotype[2]
1A	Z24864	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2*
1A	Z24862	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 spo13Δ::HIS3MX6*
1B	Z24863	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 mad2Δ::KlURA3*
1B	Z24861	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 mad2Δ::KlURA3 spo13Δ::HIS3MX6*
1C	Z11674	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4*
1C	Z12066	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
1D	Z40004	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4 mad2Δ::KlURA3*
1D	Z40005	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4 mad2Δ::KlURA3 spo13Δ::HIS3MX6*
2A	Z32563	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6*
2A	Z32562	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 spo13Δ::HIS3MX6*
2A	Z32845	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 ama1Δ::NatMX4*
2A	Z32846	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 ama1Δ::NatMX4 spo13Δ::HIS3MX6*
2B	Z40205	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4*
2B	Z40206	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6::spo13-mD::HphMX4*
2C	Z39219	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1*
2C	Z39220	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 spo13Δ::HIS3MX6*
3A	Z40478	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG-AID*::KanMX4*
3A	Z40479	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG-AID*::KanMX4 his3::P_{CUP1}-OsTIR1-F74G::HIS3*
3A	Z40480	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG-AID*::KanMX4 ama1Δ::NatMX4*
3A	Z40481	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG-AID*::KanMX4 ama1Δ::NatMX4 his3::P_{CUP1}-OsTIR1-F74G::HIS3*
3B	Z35877	*RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4*
3B	Z35876	*RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
3B	Z38625	*RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6::spo13-mD::HphMX4*
3C	Z39726	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4*
3C	Z39848	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
4A	Z38375	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ime2Δ::KanMX4::ime2-as-LEU2*
4A	Z35847	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
4A	Z38374	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6 ime2Δ::KanMX4::ime2-as-LEU2*

4B	Z36479	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4*
4B	Z36581	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 ime2Δ::KanMX4::ime2-as-LEU2*
4B	Z36480	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 spo13Δ::HIS3MX6*
4B	Z36582	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 spo13Δ::HIS3MX6 ime2Δ::KanMX4::ime2-as-LEU2*
4C	Z38121	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ime2-ΔC-ha3::HIS3MX6*
4C	Z38861	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 cdc5-as::HphMX4*
4C	Z38862	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 cdc5-as::HphMX4 ime2-ΔC-ha3::HIS3MX6*
5A	Z36479	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4*
5A	Z36595	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 cdc5-as::HphMX4*
5A	Z36480	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 spo13Δ::HIS3MX6*
5A	Z36596	*PDS1-myc18::KlTRP1 ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 spo13Δ::HIS3MX6 cdc5-as::HphMX4*
5B	Z40361	*ndt80Δ::HIS3 spo13Δ::BleMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 his3::P_{GPD}-GAL4^{484}-ER-HIS3*
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5B	Z40363	*ndt80Δ::HIS3 spo13Δ::BleMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 his3::P_{GPD}-GAL4^{484}-ER-HIS3 ura3::P_{GAL1}-CDC5-ha3-URA3 ime2Δ::KanMX4::ime2-as-LEU2*
6A	Z39137	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4*
6A	Z39135	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 clb1Δ::NatMX4*
6A	Z39136	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4*
6A	Z39134	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4 clb1Δ::NatMX4*
6B	Z39727	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::BleMX4*
6B	Z40068	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 cdc28-as2*
6B	Z39987	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6::spo13-10A::HphMX4*
6C	Z36479	*PDS1-myc18::KlTRP1 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4*
6C	Z39319	*PDS1-myc18::KlTRP1 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 cdc20::P_{HSL1}-CDC20-HphMX4 cdc28-as2*
7A	Z41535	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3::AMA1-LEU2*
7A	Z41536	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4::AMA1-6A-LEU2*

7B	Z40123	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::CaURA3::AMA1-LEU2*
7B	Z40124	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2*
7C	Z41120	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 spo13Δ::HIS3MX6::spo13-mD::HphMX4*
7C	Z41121	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 leu2::P_{DMC1}-clb1-mDK-LEU2*
7C	Z41122	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 leu2::P_{DMC1}-clb1-mDK-LEU2 spo13Δ::HIS3MX6::spo13-mD::HphMX4*
7D	Z41131	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 cdc5-as::HphMX4*
7D	Z41040	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 ime2Δ::KanMX4::ime2-as-LEU2*
7D	Z41041	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 hrr25Δ::KanMX4::hrr25-as-HIS3*
8B	Z29055	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6*
8B	Z32508	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 clb1Δ::NatMX4::clb1-12A-LEU2*
8B	Z32510	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 clb1Δ::NatMX4::clb1-12D-LEU2*
8B	Z32954	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 clb1Δ::NatMX4::clb1-12A-LEU2 ama1Δ::KanMX4*
8C	Z39726	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4*
8C	Z39898	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::NatMX4::clb1-12A-LEU2*
8C	Z39901	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::NatMX4::clb1-12D-LEU2*
9A	Z40109	*ndt80Δ::NatMX4 cdc28-as1 leu2::P_{DMC1}-CLB1-ha6-LEU2*
9A	Z40110	*ndt80Δ::NatMX4 cdc28-as1 leu2::P_{DMC1}-CLB1-ha6-LEU2 ama1Δ::KanMX4*
9A	Z40111	*ndt80Δ::NatMX4 cdc28-as1 leu2::P_{DMC1}-clb1-12A-ha6-LEU2*
9A	Z40112	*ndt80Δ::NatMX4 cdc28-as1 leu2::P_{DMC1}-clb1-12A-ha6-LEU2 ama1Δ::KanMX4*
9A	Z40113	*ndt80Δ::NatMX4 cdc28-as1 leu2::P_{DMC1}-clb1-12D-ha6-LEU2*
9A	Z40114	*ndt80Δ::NatMX4 cdc28-as1 leu2::P_{DMC1}-clb1-12D-ha6-LEU2 ama1Δ::KanMX4*
9B	Z29054	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 spo13Δ::HIS3MX6*
9B	Z32507	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 spo13Δ::HIS3MX6 clb1Δ::NatMX4::clb1-12A-LEU2*
9B	Z32509	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 spo13Δ::HIS3MX6 clb1Δ::NatMX4::clb1-12D-LEU2*
9C	Z40508	*ndt80Δ::NatMX4 cdc28-as1 spo13Δ::HIS3MX6::SPO13::HphMX4*
9C	Z40509	*ndt80Δ::NatMX4 cdc28-as1 spo13Δ::HIS3MX6::SPO13::HphMX4 ama1Δ::CaURA3*
9C	Z40858	*ndt80Δ::NatMX4 cdc28-as1 mnd2Δ::KanMX4 ura3::P_{DMC1}-SPO13-URA3*

9C	Z40859	*ndt80Δ::NatMX4 cdc28-as1 mnd2Δ::KanMX4 ura3::P_{DMC1}-SPO13-URA3 ama1Δ::CaURA3*
EV1A	Z39139	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4*
EV1A	Z39138	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
EV1B	Z40776	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 ssp2$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4*
EV1B	Z40777	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 ssp2$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
EV1B	Z40683	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 sps4$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4*
EV1B	Z40684	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 sps4$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
EV1B	Z40802	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 gip1$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4*
EV1B	Z40801	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 gip1$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
EV1B	Z40866	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 gat4$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4*
EV1B	Z40867	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 gat4$^{1-15}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
EV1C	Z38116	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4*
EV1C	Z38115	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6*
EV1D	Z35540	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX4 ama1Δ::NatMX4 ura3::P_{GPD}-GAL4^{484}-ER-URA3 leu2::P_{GALL}-cAMA1-LEU2*
EV1D	Z35539	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX4 ama1Δ::NatMX4 ura3::P_{GPD}-GAL4^{484}-ER-URA3 leu2::P_{GALL}-cAMA1-LEU2 spo13Δ::HIS3MX6*
EV2A	Z11761	*CDC14/CDC14-eGFP::LEU2 his3/his3::P_{HIS3}-eGFP-TUB1-HIS3 ura3/ura3::$tetO_{224}$::URA3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 spo13Δ::HIS3MX6::SPO13::HphMX4*
EV2A	Z12158	*CDC14/CDC14-eGFP::LEU2 his3/his3::P_{HIS3}-eGFP-TUB1-HIS3 ura3/ura3::$tetO_{224}$::URA3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 spo13Δ::HIS3MX6::spo13-m2::HphMX4*
EV2B	Z33285	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4*
EV2B	Z38409	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4*
EV2B	Z38457	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 spo13Δ::HIS3MX6::spo13-m2::HphMX4*
EV2B	Z38456	*PDS1-myc18::KlTRP1 cdc20::P_{HSL1}-CDC20-HphMX4 spo13Δ::HIS3MX6::spo13-m2::HphMX4 ama1Δ::KanMX4*
EV2C	Z39986	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6::spo13-m2::HphMX4*
EV2C	Z39849	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 cdc5-as::HphMX4*
EV2D	Z41292	*cdc20::P_{HSL1}-CDC20-HphMX4 his3::P_{GPD}-GAL4^{484}-ER-HIS3*
EV2E	Z41293	*cdc20::P_{HSL1}-CDC20-HphMX4 his3::P_{GPD}-GAL4^{484}-ER-HIS3 ura3::P_{GAL1}-SPO13-URA3*
EV3A	Z38288	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25Δ::KanMX4::HRR25-HIS3*

EV3A	Z38286	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25Δ::KanMX4::HRR25-HIS3 spo13Δ::HIS3MX6*
EV3A	Z38285	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25Δ::KanMX4::hrr25-as-HIS3 spo13Δ::HIS3MX6*
EV3B	Z38287	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25Δ::KanMX4::hrr25-as-HIS3*
EV3B	Z38284	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25Δ::KanMX4::HRR25-HIS3 ime2-ΔC-ha3::HIS3MX6*
EV3B	Z38283	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25Δ::KanMX4::hrr25-as-HIS3 ime2-ΔC-ha3::HIS3MX6*
EV3C	Z40505	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25-ΔC-ha3::HIS3MX6*
EV3C	Z40606	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 HRR25-ha3::HIS3MX6 ime2Δ::KanMX4::ime2-as-LEU2*
EV3C	Z40582	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::KanMX4 RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 hrr25-ΔC-ha3::HIS3MX6 ime2Δ::KanMX4::ime2-as-LEU2*
EV3D	Z41206	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG::KlTRP1*
EV3D	Z41207	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4-mNG::KlTRP1 HRR25-myc9::HIS3MX6*
EV4A	Z3539	*CLB1-myc9::KlTRP1*
EV4A	Z5155	*CLB3-myc9::HIS3MX6*
EV4A	Z4124	*CLB4-myc9::KlTRP1*
EV4A	Z3289	*CLB5-myc9-URA3*
EV4A	Z4125	*CLB6-myc9::KlTRP1*
EV4B	Z5312	*leu2::P_{DMC1}-CLB1-ha3-LEU2*
EV4B	Z5923	*leu2::P_{DMC1}-clb1-mDK-ha3-LEU2*
EV4C	Z3539	*CLB1-myc9::KlTRP1*
EV4C	Z3542	*CLB1-myc9::KlTRP1 ama1Δ::KanMX4*
EV4D	Z33959	*cdc20::P_{HSL1}-CDC20-HphMX4 ura3::P_{CUP1}-CDC20-URA3 ESP1-eGFP::HIS3MX6*
EV4D	Z33960	*cdc20::P_{HSL1}-CDC20-HphMX4 ura3::P_{CUP1}-CDC20-URA3 AMA1-eGFP::KlTRP1*
EV4E	Z32630	*CLB1-ha3::KlURA3*
EV4E	Z32629	*CLB1-ha3::KlURA3 AMA1-myc9::KlTRP1*
EV5A	Z32630	*CLB1-ha3::KlURA3*
EV5A	Z32605	*CLB1-ha3::KlURA3 CDC5-myc15-URA3*
EV5A	Z32604	*CLB1-ha3::KlURA3 CDC5-myc15-URA3 spo13Δ::HIS3MX6*
EV5B	Z32666	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::$tetO_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 clb1Δ::NatMX4::clb1-12A::LEU2*
EV5B	Z32664	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::$tetO_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 clb1Δ::NatMX4::clb1-12D::LEU2*
EV5C	Z39898	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::NatMX4::clb1-12A::LEU2*
EV5C	Z39728	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::BleMX4::clb1-6A::LEU2*
EV5D	Z40170	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::NatMX4::clb1-12A::LEU2*
EV5D	Z39213	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::BleMX4*
S1A	Z41151	*cdc20::P_{HSL1}-CDC20-HphMX4 CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6*

S1A	Z41152	*cdc20::P_{HSL1}-CDC20-HphMX4 CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6 spo13Δ::BleMX4*
S1B	Z35520	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 mad2Δ::KlTRP1 spo13Δ::HIS3MX6 rec8Δ::KanMX4::REC8-ha3::LEU2*
S1B	Z35519	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 mad2Δ::KlTRP1 spo13Δ::HIS3MX6 rec8Δ::KanMX4::rec8-18D-ha3::LEU2*
S1C	Z32651	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 mpc54Δ::AurCMX4 mpc70Δ::BleMX4*
S1C	Z32650	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 mpc54Δ::AurCMX4 mpc70Δ::BleMX4 spo13Δ::HIS3MX6*
S2A	Z32563	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6*
S2A	Z32562	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 spo13Δ::HIS3MX6*
S2A	Z32561	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 cdh1::P_{HSL1}-CDH1-HphMX4*
S2A	Z32560	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 cdh1::P_{HSL1}-CDH1-HphMX4 spo13Δ::HIS3MX6*
S2B	Z29055	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6*
S2B	Z29054	*PDS1-myc18::KlTRP1 cdc20::P_{SCC1}-CDC20-KanMX6 spo13Δ::HIS3MX6*
S2C	Z40205	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4*
S2C	Z40206	*CDC5-eGFP::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6::spo13-mD::HphMX4*
S3A	Z39139	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4*
S3A	Z39343	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 ime2-ΔC-ha3::HIS3MX6*
S3B	Z21085	*SPC42-eGFP::HIS3MX6 HTB1-mCherry::HIS3MX6*
S3B	Z21084	*SPC42-eGFP::HIS3MX6 HTB1-mCherry::HIS3MX6 hrr25-ΔC::KlTRP1*
S3C	Z41057	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 HRR25-ha3::HIS3MX6*
S3C	Z41059	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1$^{1-30}$::mNG-KlTRP1 CNM67-tdTomato::NatMX4 hrr25-ΔC-ha3::HIS3MX6*
S4	Z21260	*cdc20::P_{CLB2}-CDC20-KanMX6 trp1::P_{CUP1}-CDC20-TRP1 PDS1-myc18::HIS3MX6*
S4	Z21430	*cdc20::P_{CLB2}-CDC20-KanMX6 trp1::P_{CUP1}-CDC20-TRP1 PDS1-myc18::HIS3MX6 cdc5-as::HphMX4*
S4	Z33526	*cdc20::P_{CLB2}-CDC20-HphMX4 ura3::P_{CUP1}-CDC20-URA3 PDS1-myc18::KlTRP1 ime2Δ::KanMX4::ime2-as-LEU2*
S4	Z21582	*cdc20::P_{CLB2}-CDC20-KanMX6 trp1::P_{CUP1}-CDC20-TRP1 PDS1-myc18::HIS3MX6 hrr25Δ::KanMX4::hrr25-as-HIS3*
S5A	Z24864	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2*
S5A	Z31842	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 clb1Δ::NatMX4*
S5B	Z31842	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 CEN5/CEN5::tetO$_{224}$::HIS3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 clb1Δ::NatMX4*
S5C	Z39213	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::BleMX4*

S5C	Z39574	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 cdc28-as2*
S5C	Z39491	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 spo13Δ::HIS3MX6::spo13-10A::HphMX4*
S5D	Z41403	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::BleMX4*
S5D	Z41404	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb3Δ::TRP1*
S5D	Z41405	*cdc20::P_{HSL1}-CDC20-HphMX4 ama1Δ::CaURA3 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 clb1Δ::BleMX4 clb3Δ::TRP1*
S6A	Z33959	*cdc20::P_{HSL1}-CDC20-HphMX4 ura3::P_{CUP1}-CDC20-URA3 ESP1-eGFP::HIS3MX6*
S6A	Z33961	*cdc20::P_{HSL1}-CDC20-HphMX4 ura3::P_{CUP1}-CDC20-URA3 AMA1-eGFP::KlTRP1 spo13Δ::HIS3MX6*
S6B	Z32630	*CLB1-ha3::KlURA3*
S6B	Z32629	*CLB1-ha3::KlURA3 AMA1-myc9::KlTRP1*
S6B	Z32628	*CLB1-ha3::KlURA3 AMA1-myc9::KlTRP1 spo13Δ::HIS3MX6*
S6C	Z19064	*ndt80Δ::HIS3 PDS1-myc18::KlTRP1 ura3::P_{GPD}-GAL4^{484}-ER-URA3 leu2::P_{GAL1}-CLB1-LEU2 spo13Δ::HIS3MX6*
S6D	Z19478	*ndt80Δ::NatMX4 PDS1-myc18::KlTRP1 his3::P_{GPD}-GAL4^{484}-ER-HIS3 ura3::P_{GAL1}-CLB3-ha3-URA3*
S6E	Z40123	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::CaURA3::AMA1-LEU2*
S6E	Z40124	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2*
S6E	Z40209	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::CaURA3::AMA1-LEU2 acm1Δ::KanMX4*
S6E	Z40210	*cdc20::P_{HSL1}-CDC20-HphMX4 RIM4/RIM4-mNG::KlTRP1 CNM67-tdTomato::NatMX4 ama1Δ::KanMX4::AMA1-6A-LEU2 acm1Δ::KanMX4*
S7A	Z32115	*cdc20::P_{SCC1}-CDC20-HphMX4 ama1Δ::NatMX4 PDS1-eGFP::KanMX4*
S7A	Z32114	*cdc20::P_{SCC1}-CDC20-HphMX4 ama1Δ::NatMX4 CLB1-eGFP::KlTRP1*
S7A	Z32113	*cdc20::P_{SCC1}-CDC20-HphMX4 ama1Δ::NatMX4 CLB1-eGFP::KlTRP1 spo13Δ::BleMX4*
S7A	Z32112	*cdc20::P_{SCC1}-CDC20-HphMX4 ama1Δ::NatMX4 CLB1-eGFP::KlTRP1 cdc5::P_{SCC1}-CDC5-KanMX4*
S8A	Z27121	*ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3*
S8A	Z31663	*ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 CLB1-eGFP::KlTRP1*
S8A	Z31662	*ndt80Δ::NatMX4 leu2::P_{GAL1}-NDT80-LEU2 his3::P_{GPD}-GAL4^{484}-ER-HIS3 CLB1-eGFP::KlTRP1 spo13Δ::BleMX4*
S9A, S9C	Z41125	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6*
S9A, S9C	Z41711	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6 spo13Δ::BleMX4*
S9A, S9C	Z41714	*CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6 spo13Δ::BleMX4 ama1Δ::CaURA3*
S9B, S9D	Z41712	*NDT80-AID*::KanMX6 CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6*

S9B, S9D	Z41713	*NDT80-AID*::KanMX6 CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6 spo13Δ::BleMX4*
S9B, S9D	Z41715	*NDT80-AID*::KanMX6 CDC14/CDC14-eGFP::LEU2 ura3/ura3::P_{TUB1}-eGFP-TUB1-URA3 HTB1/HTB1-mCherry::HIS3MX6 spo13Δ::BleMX4 ama1Δ::CaURA3*
S10	Z3933	*ura3/ura3::$tetO_{224}$::URA3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 ndt80Δ::HIS3*
S10	Z3932	*ura3/ura3::$tetO_{224}$::URA3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 ndt80Δ::HIS3 mnd2Δ::KanMX4*
S10	Z4136	*ura3/ura3::$tetO_{224}$::URA3 leu2/leu2::P_{URA3}-tetR-tdTomato::LEU2 ndt80Δ::HIS3 mnd2Δ::KanMX4 ama1Δ::KanMX4*

[1]Strains are listed for each figure from left to right and/or top to bottom. [2]All SK1 strains are diploid with the background *MATa/MATα ho::LYS2 lys2 ade2Δ::hisG trp1Δ::hisG leu2Δ::hisG his3Δ::hisG ura3*. Mutations are homozygous unless stated otherwise.