SUPPLEMENTAL MATERIALS

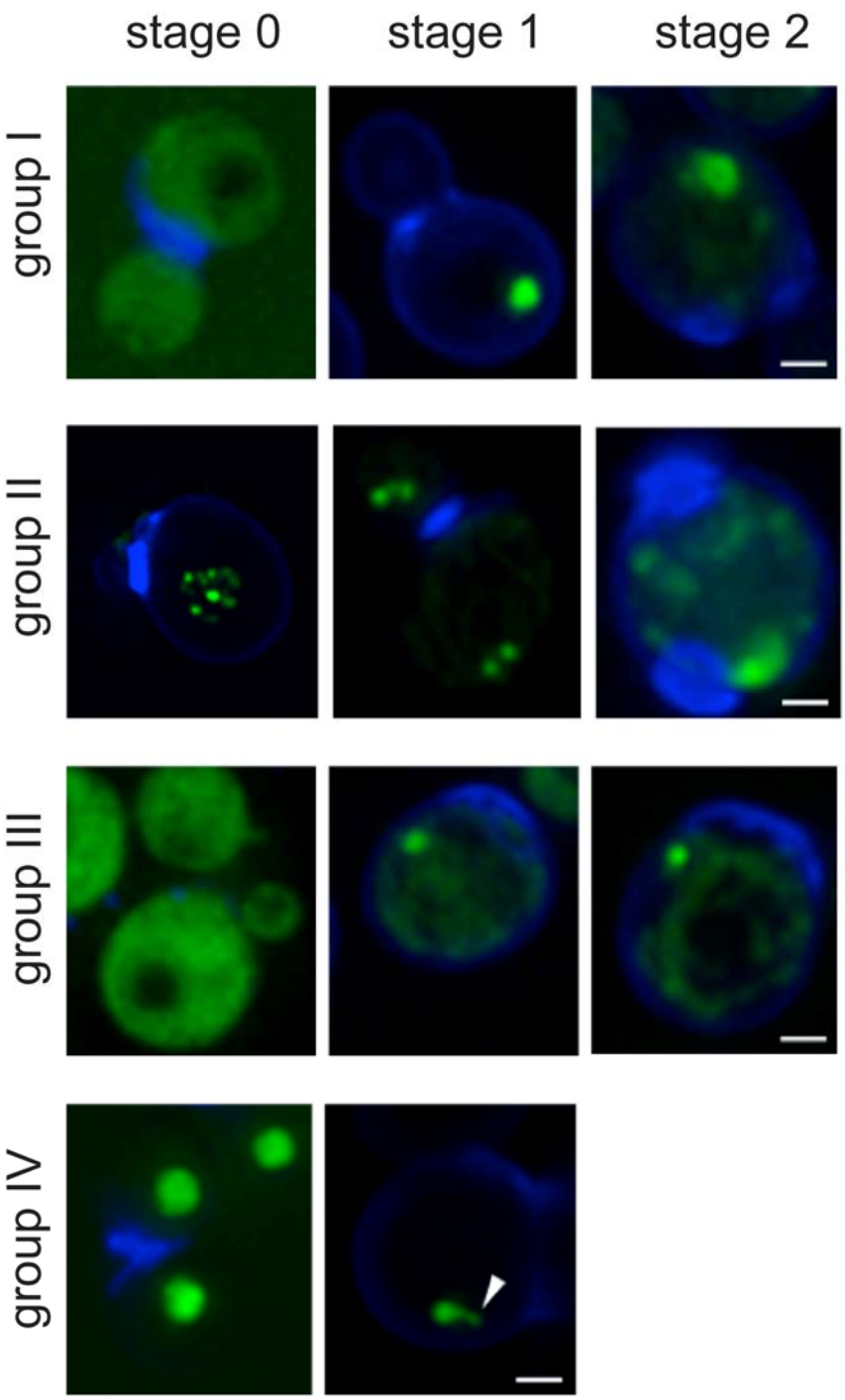

FIGURE S1. Patterns of localization changes of the 20 proteins examined. We divided these 20 proteins into 4 groups according to their characteristics of localization pattern during a 4-week time period (also see Table S1). Images of Hst2 in group I, Sir2 in group II, Sod1 in group III, and Htb1 in group IV are used to represent the typical pattern of each group. GFP is shown in green, and Calcofluor is shown in blue to demarcate the cell boundaries. The arrowhead indicates condensed chromosomes in stationary-phase cells. Scale bars, 2 μm. Stage 0, log-phase cells; Stage 1, one week after diauxic shift; Stage 2, one month after diauxic shift.

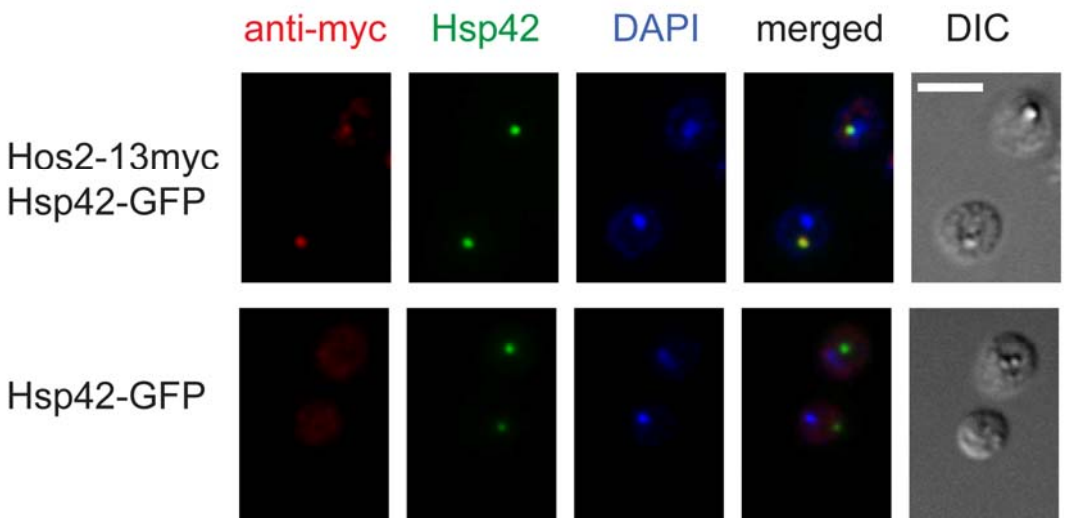

FIGURE S2. Immunostaining shows that Hos2 forms SPGs. 1-week cells were fixed and immunostained with anti-myc antibody and DAPI. Scale bar, 5 μm.

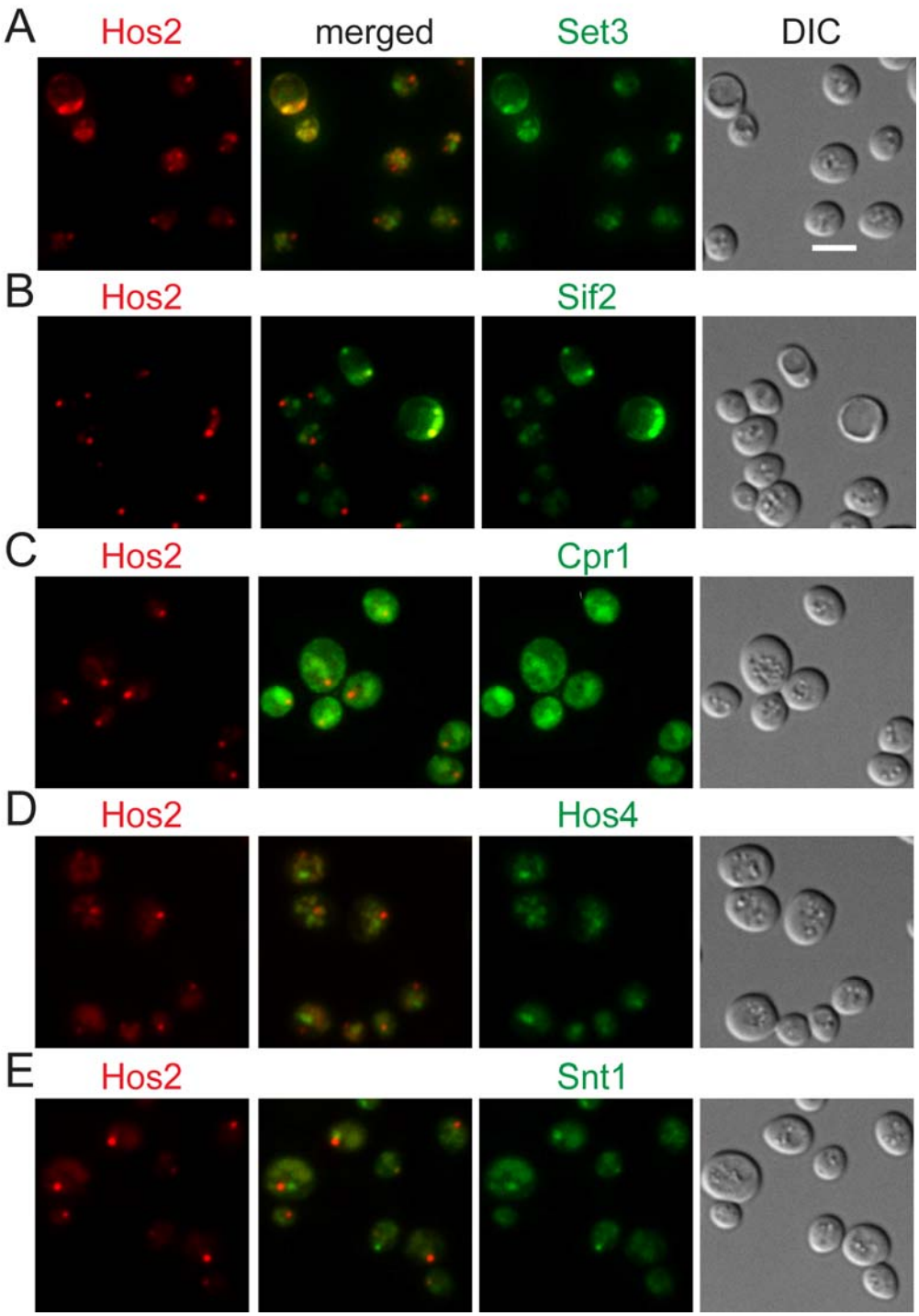

FIGURE S3. Hos2 only co-localizes with some of the Set3/Hos2 complex subunits in quiescent yeast cells. Stationary-phase cells coexpressing Hos2-mCherry and one of the Set3/Hos2 complex proteins tagged with GFP were examined. Only Set3 (A) and Sif2 (B) co-localized with Hos2, but not Cpr1 (C), Hos4 (D), or Snt1 (E). Scale bar, 5 μm.

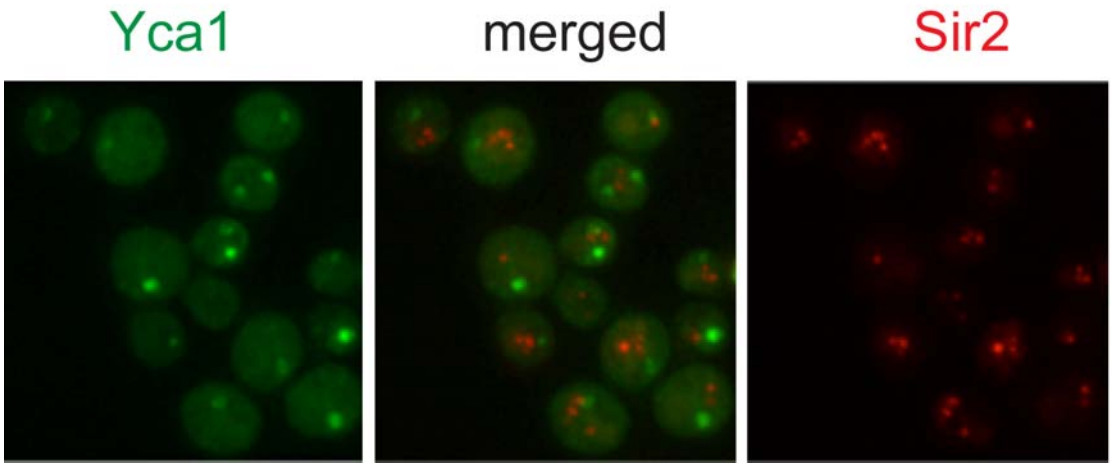

FIGURE S4. Yca1-SPGs do not co-localize with Sir2. Stationary-phase cells coexpressing Yca1-GFP and Sir2-mCherry were examined.

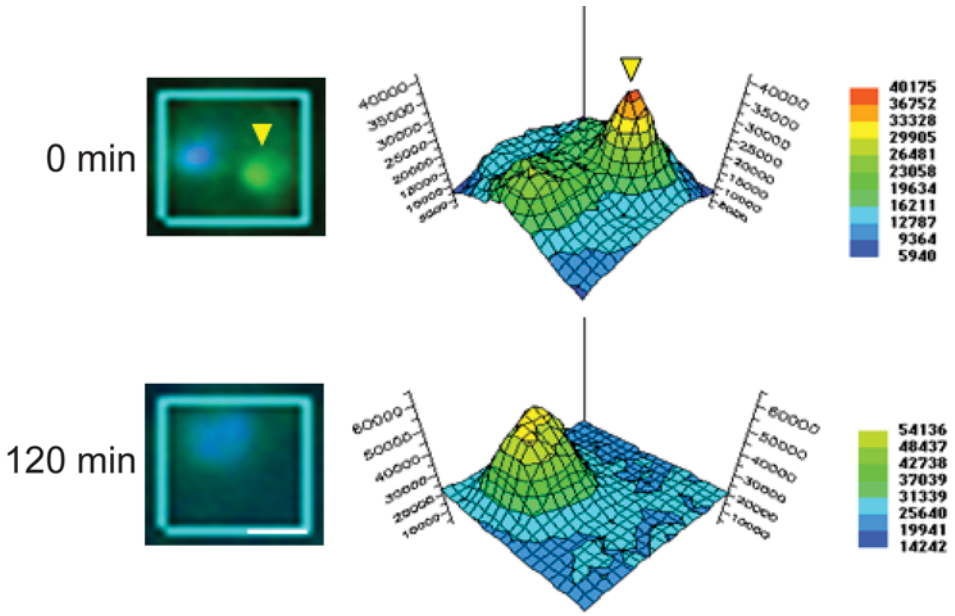

FIGURE S5. Quantification of the distribution of Hos2-GFP. Stationary-phase cells before (upper panel) or after (lower panel) 2 h of recovery were examined by microscopy, and the images were analyzed as described in Materials and Methods. The yellow arrowhead indicates a cytoplasmic Hos2-SPG (green). Nuclear DNA is shown in blue. Scale bar, 2 μm.

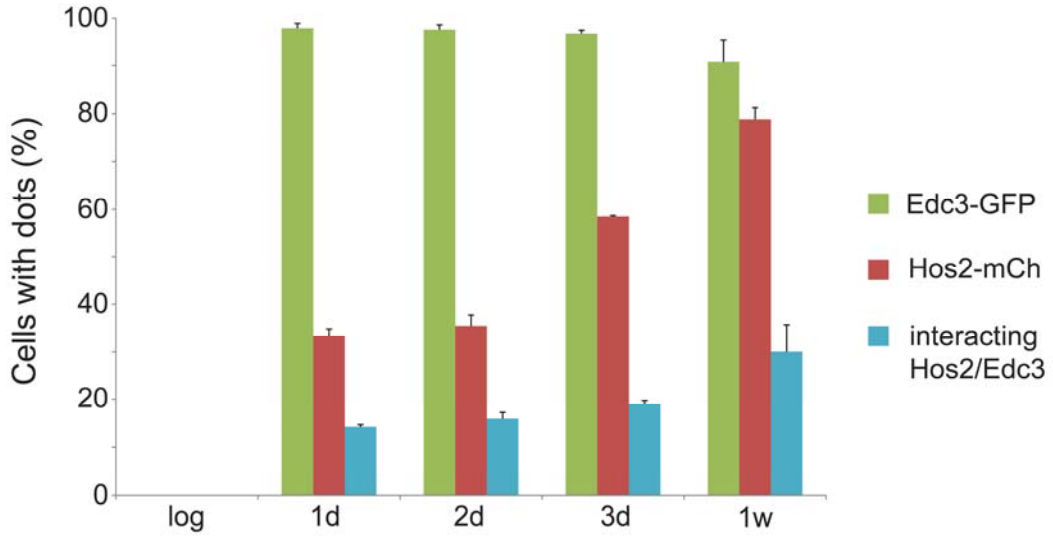

FIGURE S6. A proportion of Hos2-SPGs are interacting with P-bodies (Edc3). Cells were grown in YPD medium at 28°C and collected in log phase and at different time points in stationary phase. The frequency of cells that contain Hos2-SPGs (red bar), P-bodies (green bar), or interacting Hos2/Edc3 dots (blue bar) is shown. At least 100 cells were counted for each time point. Data represent the mean ± s.e.m. of three biological replicates.

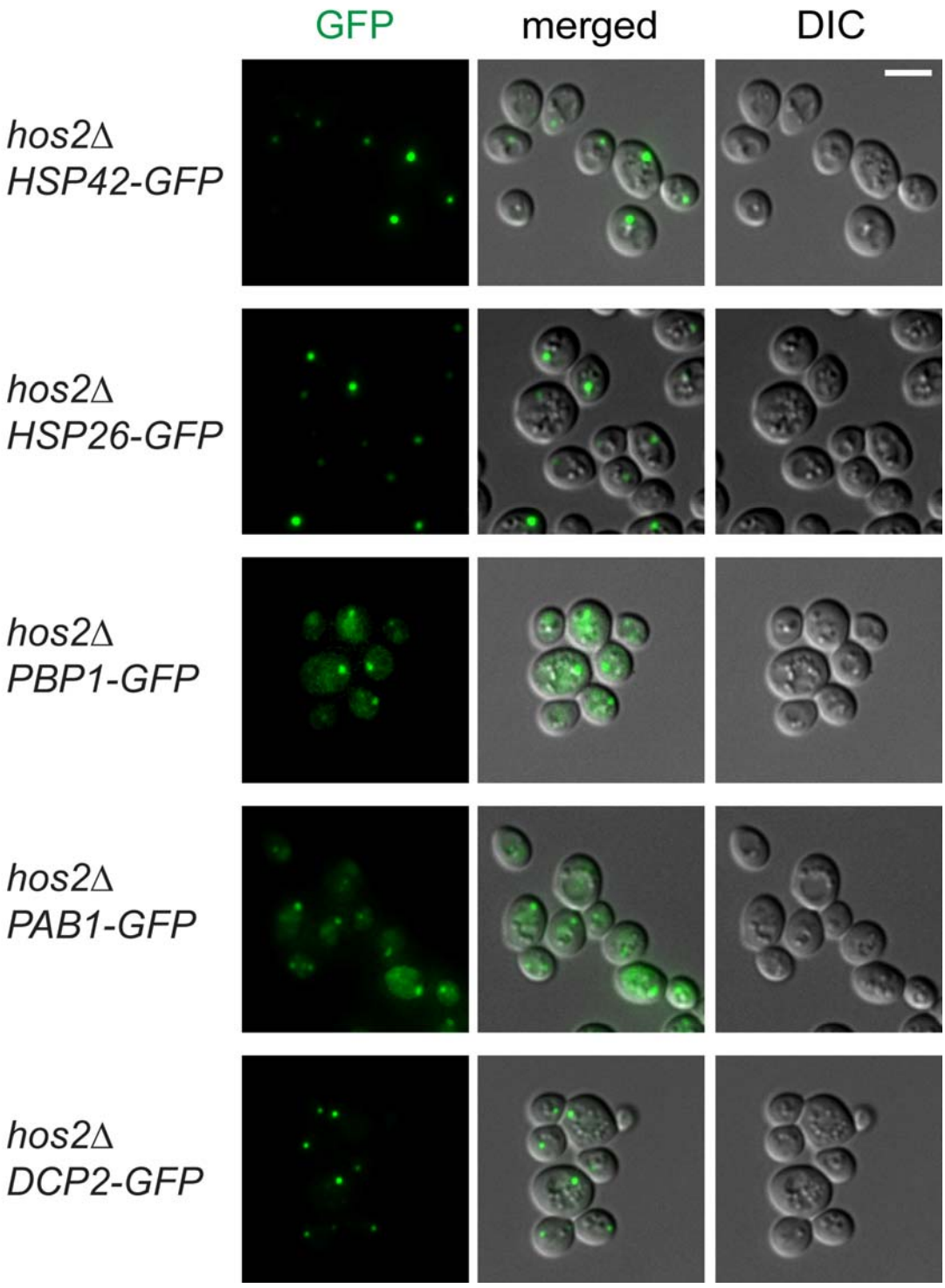

FIGURE S7. Deletion of *HOS2* does not have obvious effects on the formation of Hsp42-, Hsp26-, Pbp1-, Pab1- and Dcp2-SPGs.

Supplementary Tables

TABLE S1. Widespread protein reorganization in stationary-phase yeast cells.

Group	Protein name	Pattern
I	Hos2 (88 ± 8%), Hst2 (78 ± 14%), Yca1 (65 ± 7%)	(Stage 0) Cytoplasmic/nuclear diffusion (Stage 1) Single or few cytoplasmic bright dots (Stage 2) Bright dots and diffused cytoplasmic patches
II	Hda1 (52 ± 18%), Hst1 (100 ± 0%), Rpd3 (79 ± 7%), Sds3 (39 ± 5%), Set2 (100 ± 0%), Sir2 (100 ± 0%), Sir3 (99 ± 2%) Rap1 (100 ± 0%), Yku80 (98 ± 3%), Mlp1 (95 ± 4%), Net1 (98 ± 3%), Rox3 (97 ± 2%)	(Stage 0) Normal nuclear localization (Stage 1) Multiple cytoplasmic dots (Stage 2) Diffused cytoplasmic patches
III	Sod1 (10 ± 5%), Sod2 (9 ± 4%), Tdh2 (6 ± 6%)	(Stage 0) Cytoplasmic localization (Stage 1 and 2) Cytoplasmic localization, occasionally with single or few small dots
IV	Htb1, Nup49	(Stage 0, 1, and 2) No changes in their localizations

Patterns of localization changes of the 20 proteins examined. We divided these 20 proteins into 4 groups according to their characteristics of localization pattern during the progression of granule formation. The numbers in parentheses represent the mean ± SD of cells containing dots in three biological replicates. Stage 0, log-phase cells; Stage 1, one week after diauxic shift; Stage 2, one month after diauxic shift.

TABLE S2. Yeast strains used in this study

Strain	Genotype	Reference or source
GFP-tagged library	Isogenic to ATCC 201388*; MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 ORF-GFP*::*HIS3*	Huh, et al. (2003)
IS1	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HDA1-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS2	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HST1-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS3	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HST2-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS4	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HTB1-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS5	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 NET1-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS6	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 RPD3-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS7	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 SCL1-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS8	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 SIR3-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS9	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 YCA1-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS10	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 YKU80-GFP*::*HIS3 SIR2-mCherry*::*kanMX*	This study
IS11	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 CPR1-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study

IS12	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HOS4-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS13	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HSC82-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS14	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HSP26-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS15	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HSP42-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS16	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HST2-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS17	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 HTB1-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS18	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 SCL1-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS19	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 SET3-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS20	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 YCA1-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS21	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 EDC3-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS22	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 PAB1-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS23	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 PBP1-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS24	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 YGR250C-GFP*::*HIS3 HOS2-mCherry*::*kanMX*	This study
IS25	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 bmh1*::*kanMX4 HOS2-GFP*::*HIS3*	This study

IS26	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 bmh1*::*kanMX4 HST2-GFP*::*HIS3*	This study
IS27	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 bmh2*::*kanMX4 HST2-GFP*::*HIS3*	This study
IS28	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 bmh2*::*kanMX4 SCL1-GFP*::*HIS3*	This study
IS29	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 cmk1*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS30	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 cmk1*::*kanMX4 YCA1-GFP*::*HIS3*	This study
IS31	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 cpr1*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS32	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 gis1*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS33	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 gis1*::*kanMX4 SCL1-GFP*::*HIS3*	This study
IS34	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hos4*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS35	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsc82*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS36	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsc82*::*kanMX4 SIR2-GFP*::*HIS3*	This study
IS37	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp26*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS38	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp26*::*kanMX4 HST2-GFP*::*HIS3*	This study
IS39	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp42*::*kanMX4 HOS2-GFP*::*HIS3*	This study

IS40	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp42::kanMX4 SCL1-GFP::HIS3*	This study
IS41	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp42::kanMX4 YCA1-GFP::HIS3*	This study
IS42	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp82::kanMX4 SIR2-GFP::HIS3*	This study
IS43	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hsp82::kanMX4 YCA1-GFP::HIS3*	This study
IS44	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hst1::kanMX4 HOS2-GFP::HIS3*	This study
IS45	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 moh1::kanMX4 HOS2-GFP::HIS3*	This study
IS46	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 moh1::kanMX4 HST2-GFP::HIS3*	This study
IS47	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 ras1::kanMX4 HOS2-GFP::HIS3*	This study
IS48	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 ras1::kanMX4 SCL1-GFP::HIS3*	This study
IS49	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 rim15::kanMX4 HOS2-GFP::HIS3*	This study
IS50	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 rim15::kanMX4 HST2-GFP::HIS3*	This study
IS51	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 rim15::kanMX4 SCL1-GFP::HIS3*	This study
IS52	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 rim15::kanMX4 YCA1-GFP::HIS3*	This study
IS53	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 set3::kanMX4 HOS2-GFP::HIS3*	This study

IS54	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 sif2*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS55	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 tpk1*::*kanMX4 HOS2-GFP*::*HIS3*	This study
IS56	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 tpk1*::*kanMX4 HST2-GFP*::*HIS3*	This study
IS57	*MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 ygr250c*::*kanMX4 HOS2-GFP*::*HIS3*	This study
JYL14	*MATα ade2-1*	Lab stock
JYL69	*MATa leu2-3*	Lab stock
JYL97	*MATa leu2-3*	Lab stock
JYL973	*MATa ade2-1 can1-100 his3-11*, *15*::*pFUS1-EGFP-HIS3 HTB1-mCherry*::*kan leu2-3 trp1-1 ura3-1*	Lab stock
hos2Δ	Isogenic to BY4741; *MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 hos2*::*kanMX4*	Giaever, et al. (2002)
sir2Δ	Isogenic to BY4741; *MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 sir2*::*kanMX4*	Giaever, et al. (2002)