Supplemental Materials

Molecular Biology of the Cell

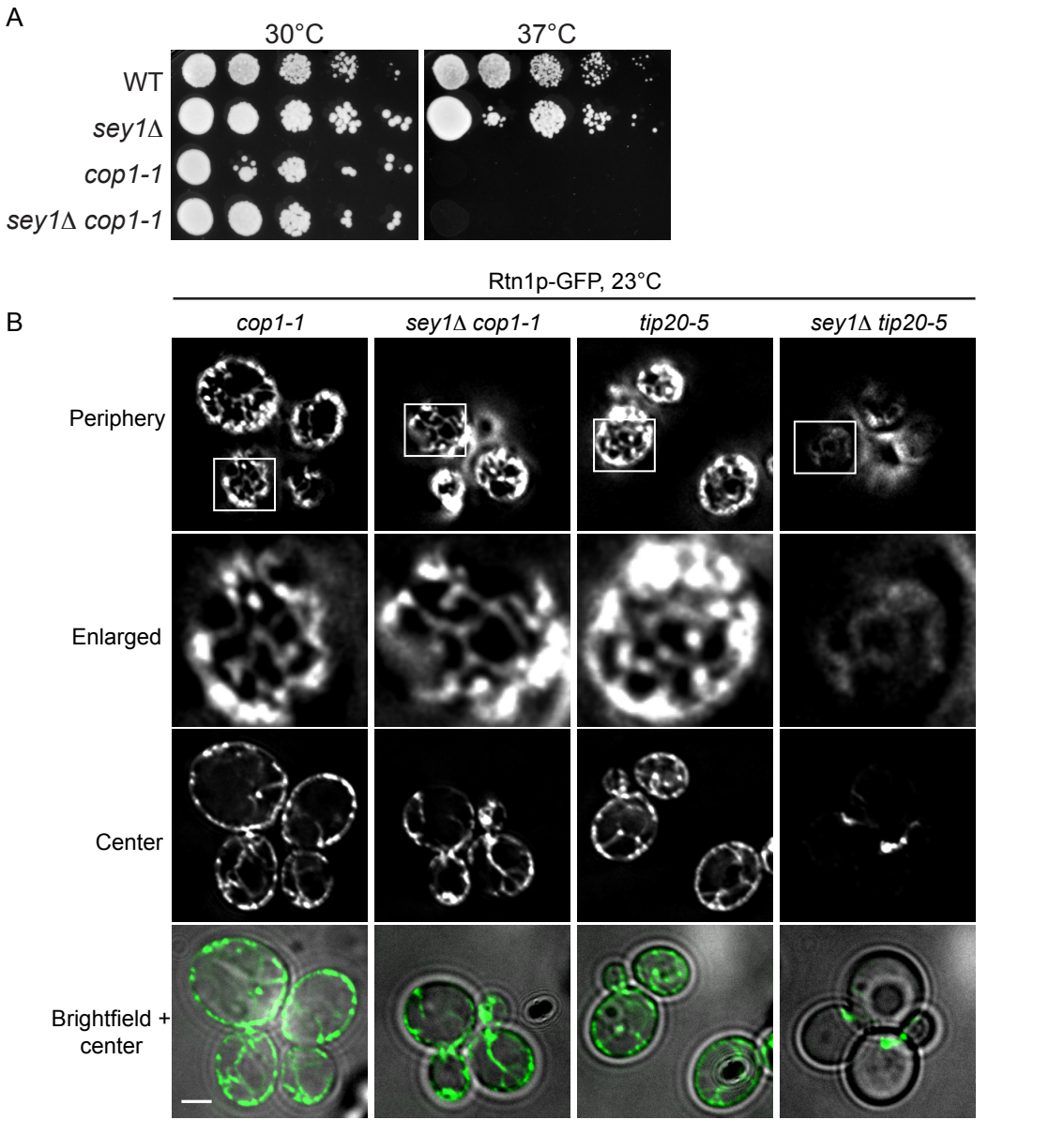
Rogers et al.

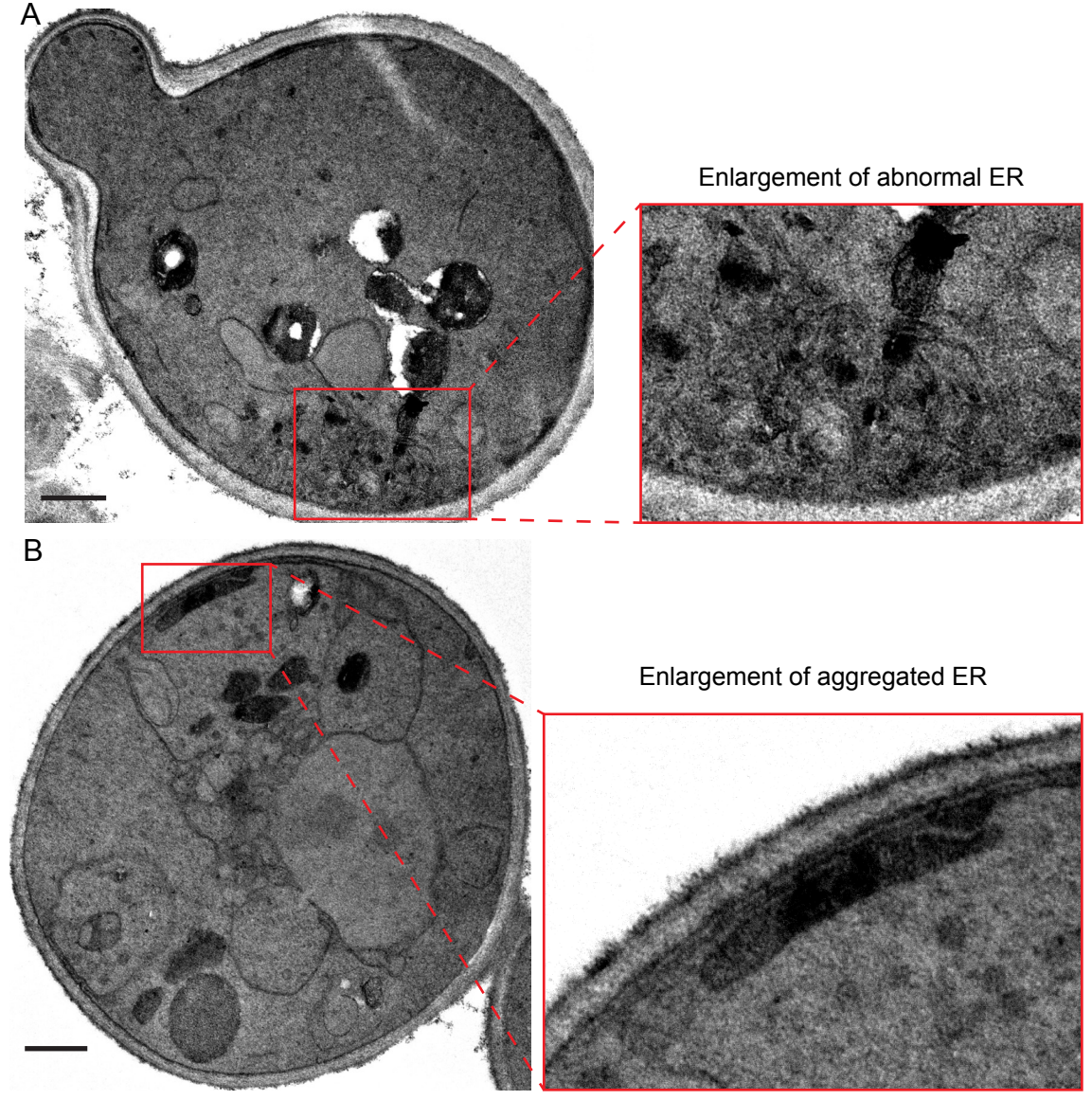
Supplementary Figure Legends

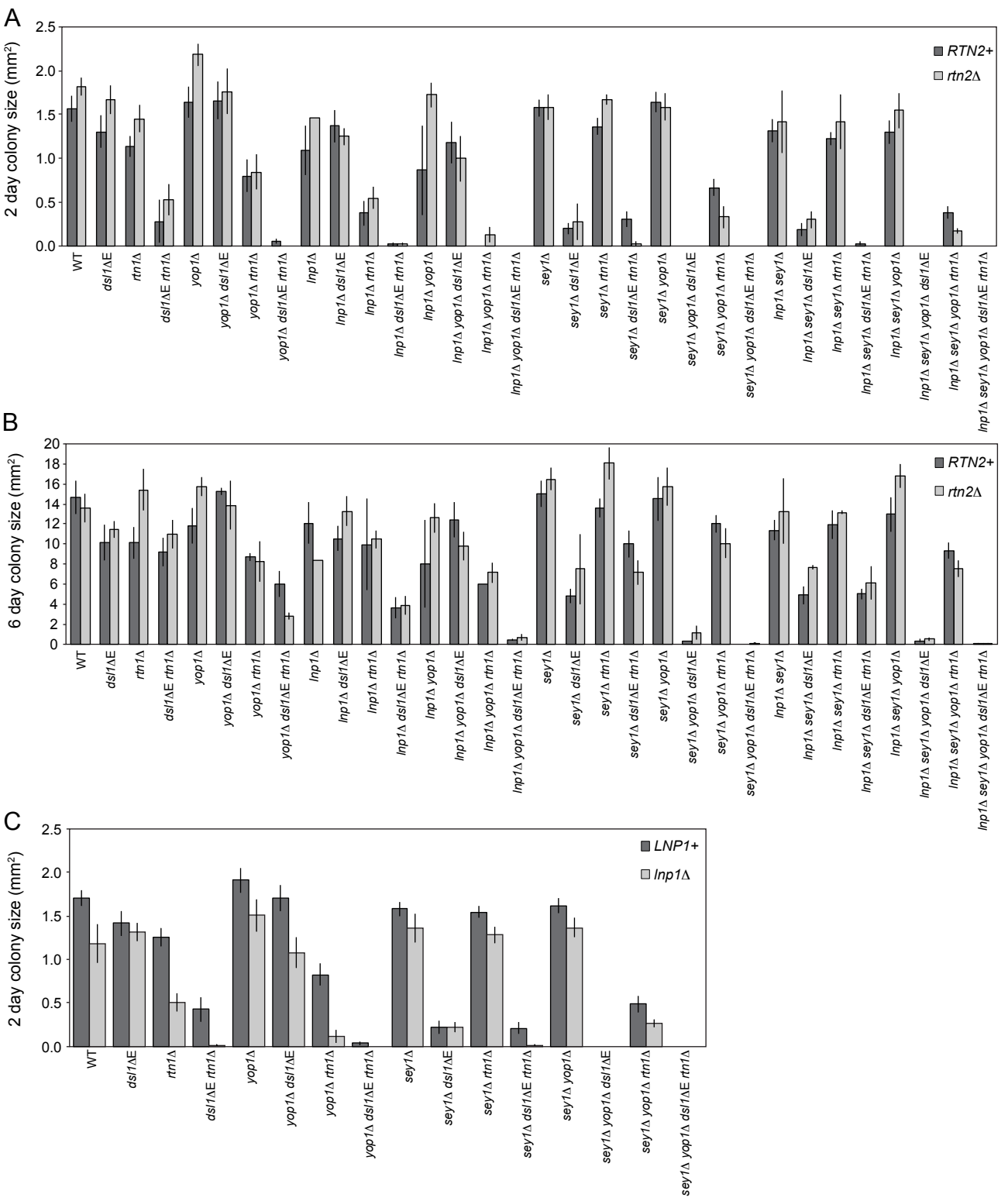
Figure S1. ER structure is disrupted in *sey1*Δ *tip20-5* but not *sey1*Δ *cop1-1* mutants. (A) Growth assays as in Figure 3; indicated genotypes derived from parent diploid MY15010, grown for 2 days at 30°C or 37°C. (B) Microscopy of cells expressing integrated Rtn1-GFP, as in 4B, except cells were grown and imaged at 23°C. *cop1-1* and *sey1*Δ *cop1-1* cells were haploids derived from diploid strain MY15011, and *tip20-5* and *sey1*Δ *tip20-5* were derived from MY15008. Scale bar, 2 µm.

Figure S2. Abnormal ER examples of *sey1*Δ *dsl1*ΔE cells. (A) Representative electron micrograph of abnormal ER in *sey1*Δ *dsl1*ΔE cells, as in Figure 4C. Enlargement depicts disordered ER aggregates. Scale bar, 500 nm. (B) Representative example of dense, aggregated ER, as in Figure 4C. Scale bar, 500 nm.

Figure S3. *RTN2* has a minimal effect on growth rate and *LNP1* has no synthetic genetic interactions with *dsl1*ΔE. (A) Colony sizes after tetrad dissection (parent MY14454) and 48 hours of growth at 30°C for the indicated genotypes, comparing *RTN2*+ (dark bars) and *rtn2*Δ (light bars). Number of colonies averaged for each genotype ranged from 1 to 10. Errors bars show +/- standard error of the mean for genotypes averaging more than one colony. (B) As in A, but after 148 hours (~6 days) of growth at 30°C. (C) As in A, except genotypes have been averaged independently of *RTN2* and dark and light bars are comparing *LNP1*+ and *lnp1*Δ, respectively.


A
30°C
37°C
WT
sey1Δ
cop1-1
sey1Δ cop1-1
Rtn1p-GFP, 23°C
B
cop1-1
sey1Δ cop1-1
tip20-5
sey1Δ tip20-5
Periphery
Enlarged
Center
Brightfield + center


A
Enlargement of abnormal ER
B
Enlargement of aggregated ER


A
2 day colony size (mm²)
RTN2+
rtn2Δ
WT
dsl1ΔE
rtn1Δ
dsl1ΔE rtn1Δ
yop1Δ
yop1Δ dsl1ΔE
yop1Δ rtn1Δ
yop1Δ dsl1ΔE rtn1Δ
lnp1Δ
lnp1Δ dsl1ΔE
lnp1Δ rtn1Δ
lnp1Δ dsl1ΔE rtn1Δ
lnp1Δ yop1Δ
lnp1Δ yop1Δ dsl1ΔE
lnp1Δ yop1Δ rtn1Δ
lnp1Δ yop1Δ dsl1ΔE rtn1Δ
sey1Δ
sey1Δ dsl1ΔE
sey1Δ rtn1Δ
sey1Δ dsl1ΔE rtn1Δ
sey1Δ yop1Δ
sey1Δ yop1Δ dsl1ΔE
sey1Δ yop1Δ rtn1Δ
sey1Δ yop1Δ dsl1ΔE rtn1Δ
lnp1Δ sey1Δ
lnp1Δ sey1Δ dsl1ΔE
lnp1Δ sey1Δ rtn1Δ
lnp1Δ sey1Δ dsl1ΔE rtn1Δ
lnp1Δ sey1Δ yop1Δ
lnp1Δ sey1Δ yop1Δ dsl1ΔE
lnp1Δ sey1Δ yop1Δ rtn1Δ
lnp1Δ sey1Δ yop1Δ dsl1ΔE rtn1Δ
B
6 day colony size (mm²)
RTN2+
rtn2Δ
C
2 day colony size (mm²)
LNP1+
lnp1Δ