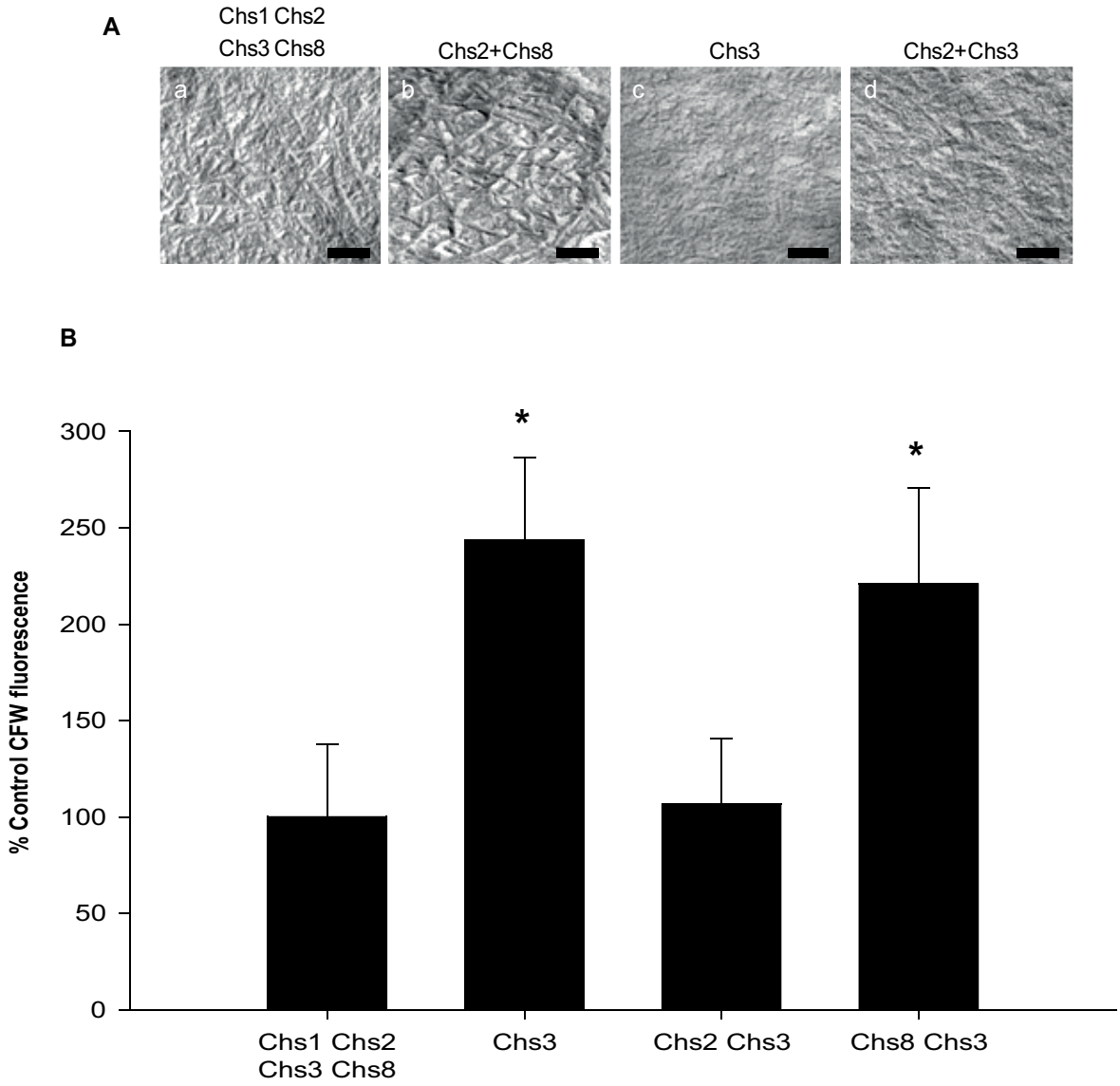
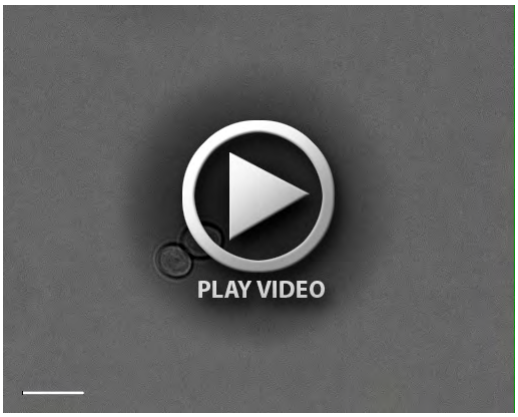


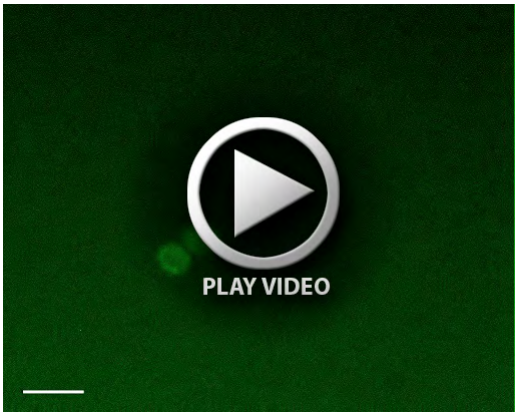
Fig. S1. Chitin microfibrils and chitin contents of cells with differing septal structures. (A). Salvage septa are comprised of chitin microfibrils of differing structure. TEMs of chitin ghosts showing chitin in the chitin plate of the wild-type septum (a), Chs2/Chs8 salvage septum (b), Chs3 salvage septum (c), and Chs2/Chs3 salvage septum (d). Scale bars are 0.2 µm. **(B).** Chitin contents of whole yeast cells with wild-type septa and salvage septa. Chitin content was calculated from measurements of the intensity of CFW fluorescence (55). Asterisks indicate significant differences (Student's T-test, $p<0.05$) compared to the wild-type. Error bars are SD (n=35).

Movie 1. Formation of the unilaminar salvage septum synthesized by Chs2 and Chs8. This salvage septum forms by extending from one side of the cell to the other, rather than by centripetal invagination as seen in wild-type cells.

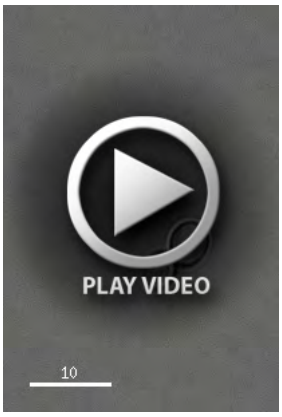
Movie 2. Formation of the salvage septa synthesized by Chs2 and Chs3. These salvage septa are proximally offset, but form by centripetal invagination, similar to that in wild-type cells.



Movie 3. The Chs1 inhibitor RO-09-3143 is fungistatic. Cells form long chains of septum-less cells and some lysis occurs. Selected frames from this movie are shown in Supplementary Fig. 3A (DIC).



Movie 4. Chs3-YFP is abnormally positioned in cells when Chs1 is inhibited with RO-09-3143. Selected frames from this movie are shown in Supplementary Fig. 3A (YFP).



Movie 5. Cells grown in the presence of the class I chitin synthase inhibitor nikkomycin Z display an unusual budding phenotype but cell division is not prevented. Selected frames of this movie are shown in Supplementary Fig. 3B (DIC).

Movie 6. Inhibition of Chs2 and Chs8 by nikkomycin Z results in the abnormal positioning of Chs3-YFP at sites of septum formation but does not prevent septum formation. Selected frames of this movie are shown in Supplementary Fig. 3B (YFP).

Movie 7. The combination of the Chs1 inhibitor RO-09-31243 and the Chs2/Chs8 inhibitor nikkomycin Z is fungicidal. Cells are unable to lay down septa and form short chains of cells that balloon and lyse. Selected frames of this movie are shown in Supplementary Fig. 3C (DIC).

Movie 8. The normal localization of Chs3-YFP is altered and functional septa are not formed when Chs1, Chs2 and Chs8 are inhibited simultaneously with RO-01-3143 and nikkomycin Z. Selected frames of this movie are shown in Supplementary Fig. 3C (YFP).

Table S1. *C. albicans* strains used in this study

Strain	Parental strain	Genotype	Reference
CAF2-1	SC5314	*URA3/ura3*Δ::*λimm434*	(Fonzi and Irwin, 1993)
C155	C154	*chs2*Δ:: *hisG/chs2*Δ::*hisG*	(Mio et al., 1996)
Myco3	Myco4	*chs3*Δ:: *hisG/ chs3*Δ::*hisG-URA3-hisG*	(Bulawa et al., 1995)
NGY128	CAI-4	*chs2*Δ:: *hisG/chs2*Δ::*hisG; chs8*Δ::*hisG/chs8*Δ::*hisG*	(Munro et al., 2003)
C157	C155	*chs2*Δ::*hisG/chs2*Δ::*hisG; chs3*Δ:: *hisG/chs3*Δ::*hisG*	(Mio et al., 1996)
NGY138	CAI-4	*chs8*Δ:: *hisG/chs8*Δ::*hisG*	(Munro et al., 2003)
KWC352	SGY243	*chs1*Δ::*hisG/chs1*Δ*; psk-URA3-MRP1p-CHS1*	(Munro et al., 2001)
KWC359	SGY243	*chs1*Δ::*hisG/chs1*Δ*; psk-URA3-MRP1p-CHS1; chs3*Δ*/chs3*Δ	(Munro et al., 2001)
NGY477	BWP17	*ura3*::*imm434*/*ura3*::*imm434*, *his1*::*hisG*/*his1*::*hisG*, *arg4*::*hisG*/*arg4*::*hisG*, *CHS3*/*CHS3-YFP-URA3*, *RPS1*/*RPS1*::CIp30	(Lenardon et al., 2007)