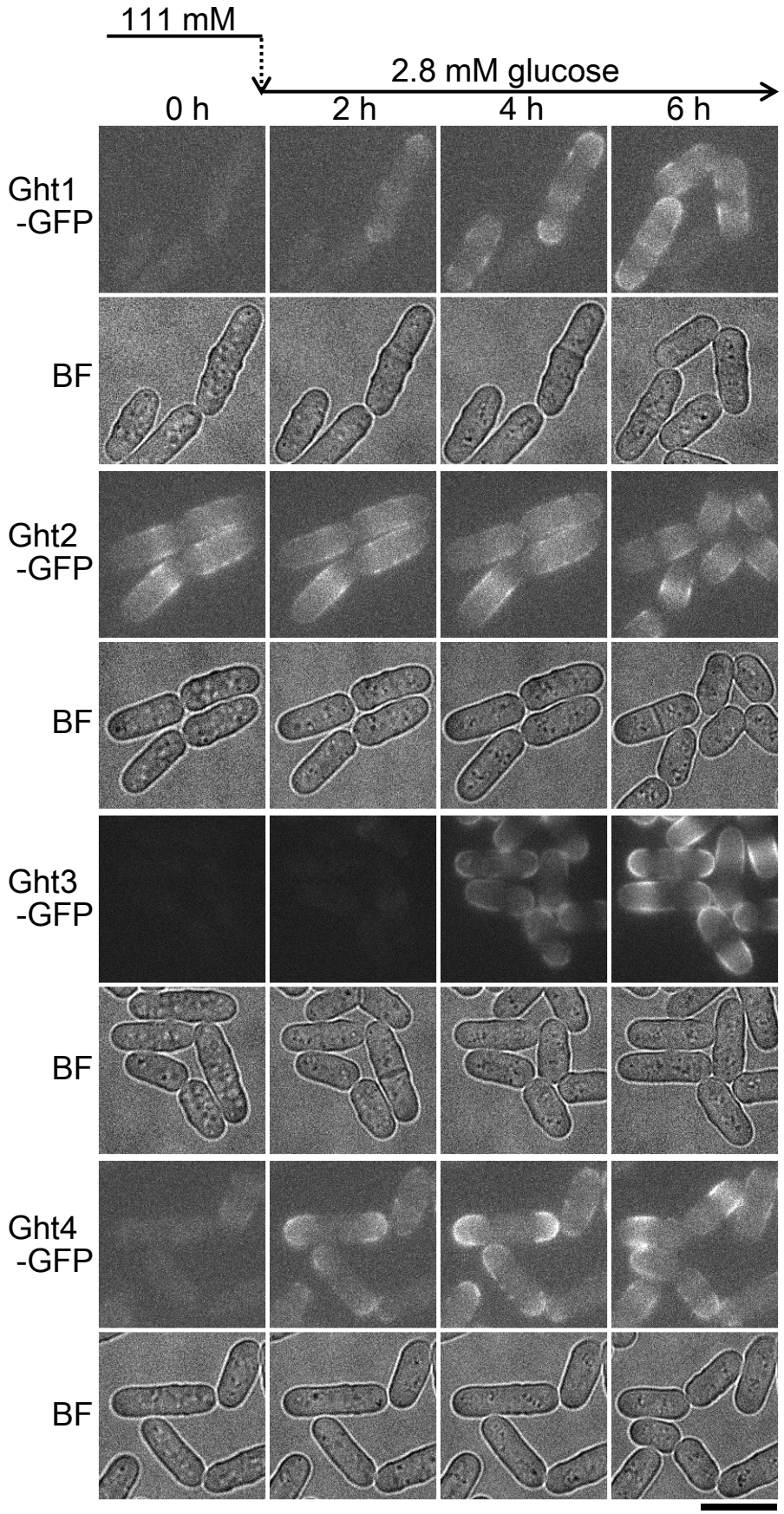
Supplemental Materials

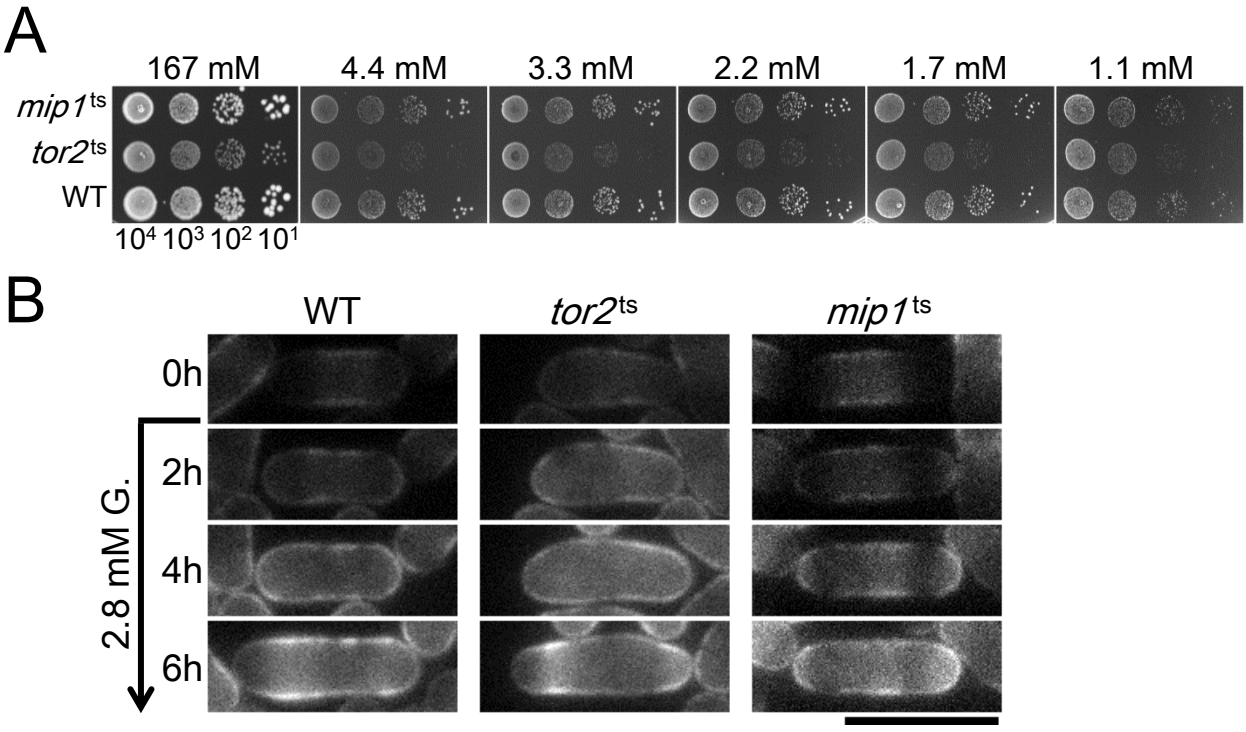
Molecular Biology of the Cell

Saitoh et al.

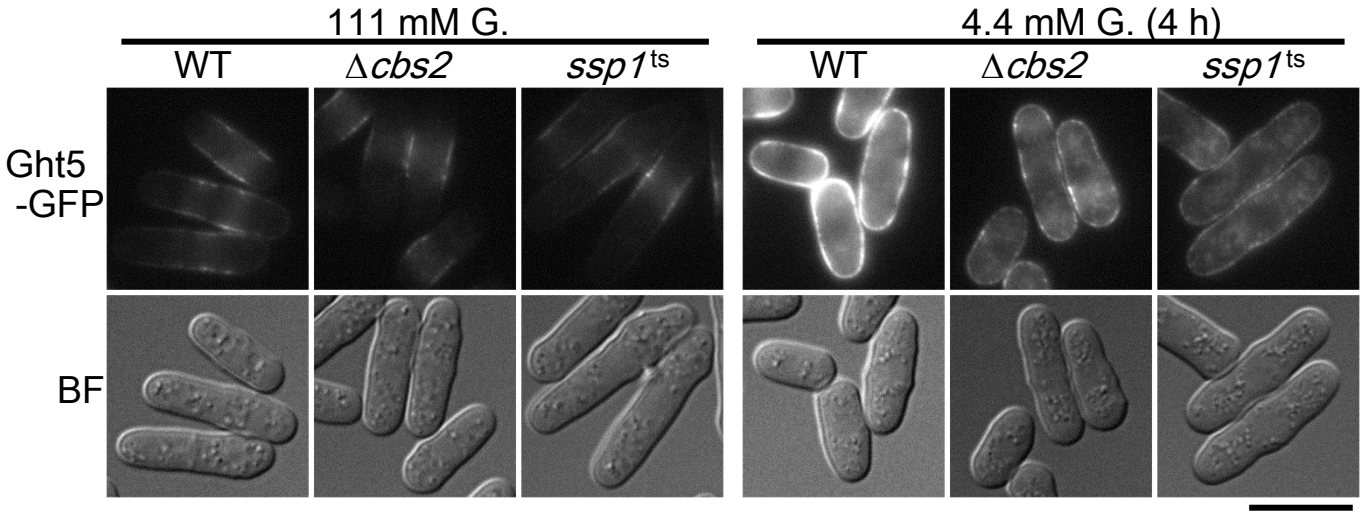
Saitoh et al Supplemental Figure S1



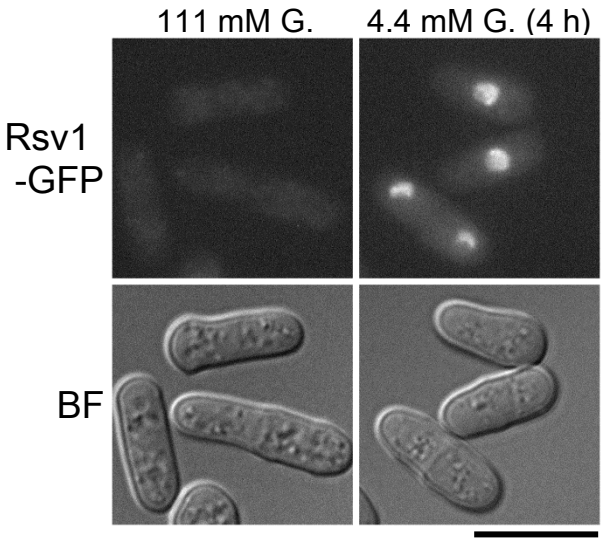
Saitoh et al Supplemental Figure S2



Saitoh et al Supplemental Figure S3



Saitoh et al Supplemental Figure S4



Supplemental Figure legends

Supplemental Figure S1 (related to Figure 2). **Time-lapse images of GFP-fused Ght transporters.**

Cells harboring the indicated GFP-tagged *ght*$^{+}$ gene were cultivated at 26°C in a microfluidic perfusion chamber with a continuous supply of medium, and the glucose concentration was switched from 111 mM to 2.8 mM at time 0. GFP fluorescence and brightfield (BF) microscopy images at 2 h-intervals are shown. Fluorescent signals of Ght6-GFP and Ght7-GFP were too low to be detected. Bar, 10 μm.

Supplemental Figure S2 (related to Figure 5). **TORC1 is not essential for cell proliferation in low glucose.**

(A) Aliquots of 10^4 cells of *mip1-310*, *tor2-L2048S*, and the WT strains were diluted serially 10-fold, spotted onto YES medium plates containing the indicated concentrations of glucose, and incubated at 30°C for 3 d. **(B)** Time-lapse images of Ght5 localization in the WT and TORC1-related mutant cells. WT and indicated mutant cells harboring Ght5-GFP were cultivated at semi-permissive temperatures (30°C for *tor2* and 33°C for others) in a microfluidic perfusion chamber with continuous supply of medium, and the glucose concentration was switched from 111 mM to 2.8 mM at time 0 h. GFP fluorescent images at 2-h intervals are shown. Bar, 10 μm.

Supplemental Figure S3 (related to Figure 6). **Cbs2, the γ-subunit of AMPK, is required for elevated expression of Ght5 under low-glucose conditions.**

Micrographs of WT, Δ*cbs2* and the *ssp1-837* cells expressing Ght5-GFP under the native promoter. After 4-h cultivation in EMM2 medium containing 111 mM or 4.4 mM

glucose at 33°C, cells were harvested by centrifugation and resuspended in a small amount of the same medium. Ght5-GFP fluorescence and brightfield (BF) microscopy images showing cell shape were obtained immediately without fixation. The fluorescence images in this panel were processed under the same conditions. Bar, 10 μm.

Supplemental Figure S4 (related to Figure 7). **Intracellular localization of Rsv1-GFP in WT cells.**

Cells expressing Rsv1-GFP were transferred from EMM2 medium with 111 mM glucose to EMM2 medium with either 111 mM or 4.4 mM glucose, and cultivated for 4 h before sampling. Rsv1-GFP fluorescence and brightfield microscopy images were obtained immediately without fixation. Bar, 10 μm.