

Figure S1. Deletion of *hk0480* in *sasAcikA*-null background abolishes *kaiBC* promoter activity. Bioluminescence traces measured over several days. (A) Inactivation of response regulators 2466 and SrrA did not affect transcriptional activity in *sasAcikA* null background. (B) Single knockouts of *sphR* and *hk0480* did not affect circadian rhythms of gene transcription.

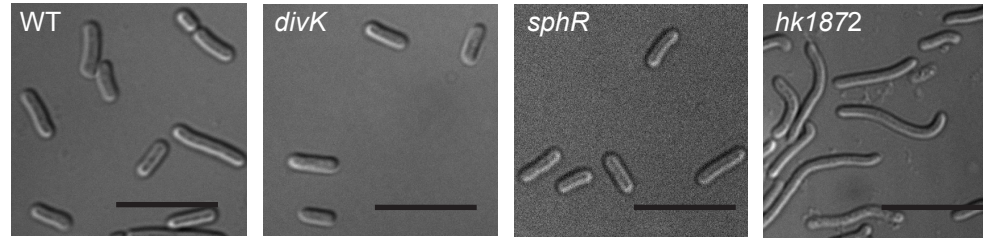


Figure S2. **Brightfield micrographs of WT, *divK*, and *sphR* single mutant cells.** The *divK* and *sphR* mutants do not exhibit cell length defect under low-light conditions permissive for cell elongation of a *cikA* null, whereas some elongation is observed in cells of an *hk1872* single mutant population. Scale bars, 10 μ m.

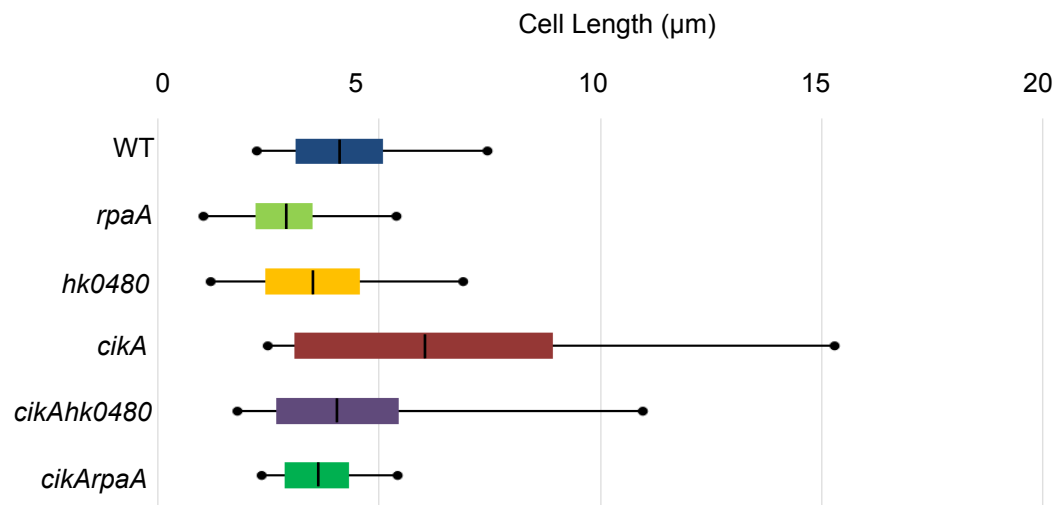


Figure S3. **Deletion of *hk0480* suppresses elongation of *cikA*-null cells.** Average cell lengths \pm SD ($n = 100$ each strain). Shortest and longest cells in population are denoted by knobs.

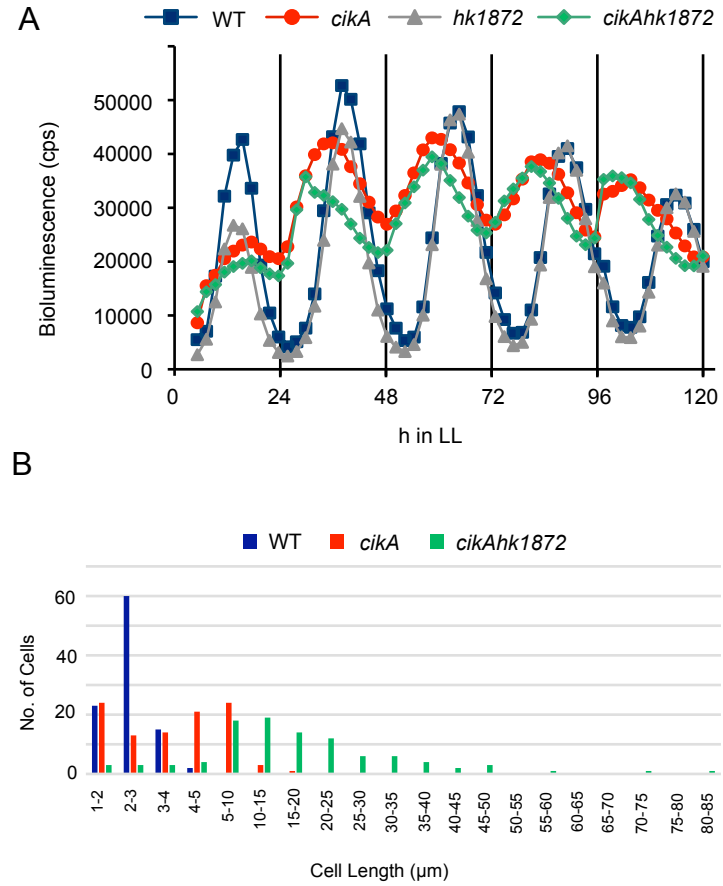


Figure S4. Inactivation of HK1872 in *cika*-null background does not affect rhythms of *kaiBC* promoter activity. (A) Representative bioluminescence traces measured over several days. (B) Histogram representing range of cell lengths for populations of WT, *cika*, and *cikAhk1872* cells (n = 100 each strain).