Supporting Information

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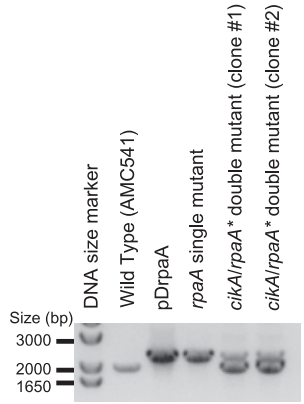

Fig. S1. Incomplete segregation of the *rpaA*$^{-}$(Km) locus under the *cikA*$^{-}$(Gm) background. A coding region of *rpaA* was amplified by PCR using two primers, 5′-CCGCCCTCTGCCTCCTCATCCGCGAAGCAACCC-3′ and 5′-CCAAATCACTCAGTTTCTGGCACGACCTCCTCT-3′. Genomic DNAs of the wild-type strain (AMC541), the *rpaA* single mutant [*rpaA*$^{-}$(Km)/AMC541], two clones of the *cikA*/*rpaA** double mutant were used for the templates (an asterisk indicates the incomplete segregation of the *rpaA* locus). A plasmid that contained a kanamycin resistance cassette for disruption of the *rpaA* locus, pDrpaA (1), was also used as a control template. The sizes of the PCR amplicons for the intact *rpaA* locus and the mutated *rpaA* locus were 1950 bp and 2287 bp, respectively. PCR mixtures were subjected to agarose gel electrophoresis together with a DNA size marker. The *cikA*/*rpaA** double mutant was obtained by the following procedures. The *cikA* single mutant, *cikA*$^{-}$(Gm)/AMC541, was transformed with pDrpaA and selected on kanamycin-containing BG-11M (2) agar plates for a week under standard conditions. Kanamycin-resistant colonies were streaked on a fresh kanamycin-containing BG-11M agar plate and then they were cultured in BG-11M liquid medium to harvest cells for genomic DNA isolation. Two independent colonies were examined.

1. Takai N, et al. (2006) A KaiC-associating SasA-RpaA two-component regulatory system as a major circadian timing mediator in cyanobacteria. *Proc Natl Acad Sci USA* 103: 12109–12114.

2. Bustos SA, Golden SS (1991) Expression of the psbDII gene in *Synechococcus* sp. strain PCC 7942 requires sequences downstream of the transcription start site. *J Bacteriol* 173: 7525–7533.