Artificial complementary chromatic acclimation gene expression system in *Escherichia coli*

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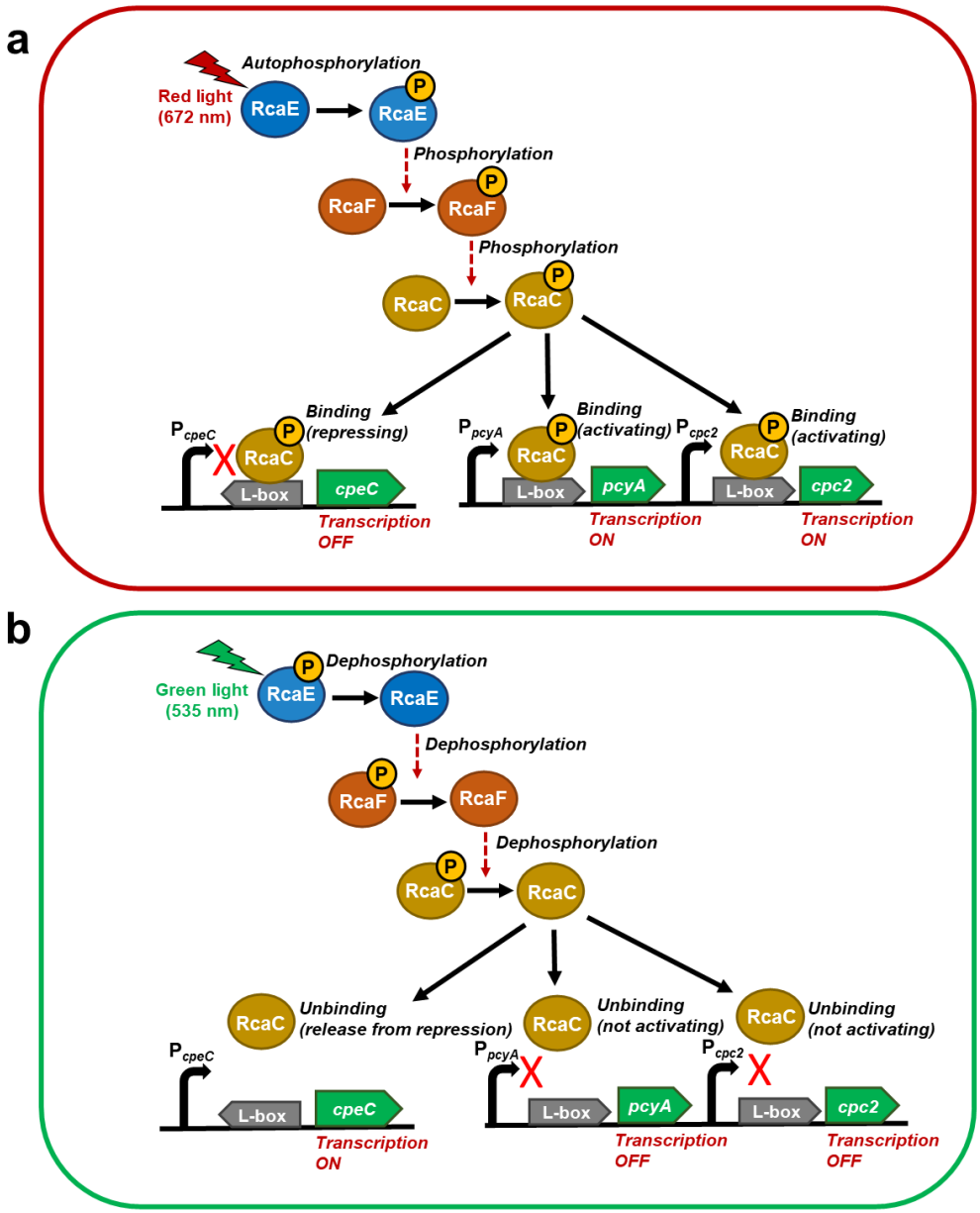
Supplementary information



16 **Figure S1.** Scheme of CCA system with red and green light-regulated gene expression system, derived from
17 *Fremyella diplosiphon* [14] with some modifications. **a** Under red light, RcaE, RcaF, and RcaC are phosphorylated.
18 Phosphorylated RcaC binding to L-box within the promoter region activates *pcyA* and *cpc2* transcription and represses
19 *cpeC* transcription. **b** Under green light, RcaE, RcaF, and RcaC are dephosphorylated. Unphosphorylated RcaC does
20 not bind to L-box; consequently, *pcyA* and *cpc2* transcription is deactivated and *cpeC* is transcribed.
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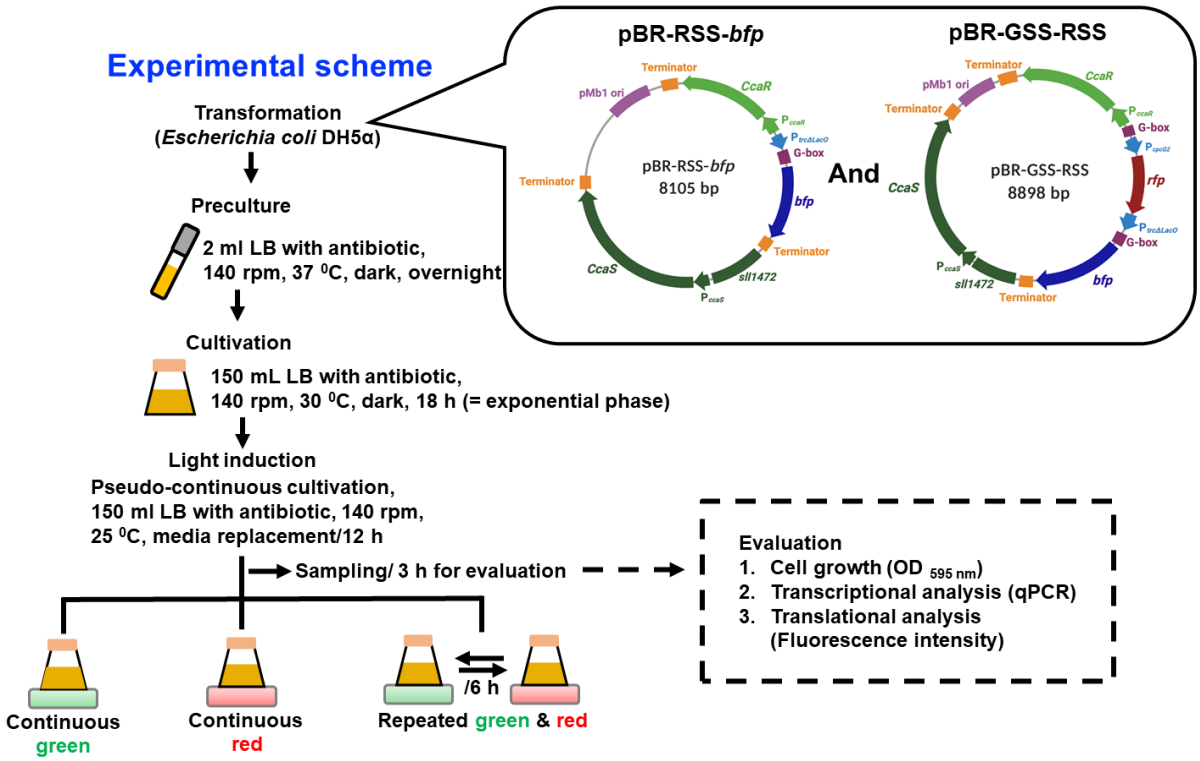

Figure S2. Experimental scheme of *E. coli* transformants harboring pBR- RSS-*bfp* and pBR-GSS-RSS under pseudo-continuous cultivation [25].