Figure EV1. Single-cell lineages from two movies of psbA expression show two-peak oscillations.

A Time traces of $P_{\text{psbA}}$-YFP reporter strains grown under low light (ca. 15 $\mu$E m$^{-2}$ s$^{-1}$ cool white light). Individual lineages show the existence of a secondary peak following the main (dusk timed) peak of expression. Cells remain synchronised, allowing double peak to be observed in the mean trace (black line).

B In a different movie, due to desynchronisation, the double peak is less apparent in the mean trace (black line).

Data information: In (A) and (B), each line under the black mean trace represents one single-cell lineage.
A histogram of $P_{\text{sigC}}$-YFP expression in wild-type (red) and $\Delta \text{sigC}$ deletion mutant (blue) under ca. 15 $\mu$E m$^{-2}$ s$^{-1}$ cool white light. For the wild type, 664 cells from nine movies were collected, whereas for the $\Delta \text{sigC}$ deletion strain, 1,084 cells from six movies were collected.

B Histogram of $P_{\text{sigC}}$-YFP expression in wild-type (red) and $\Delta \text{sigC}$ deletion mutant (blue) under ca. 35 $\mu$E m$^{-2}$ s$^{-1}$ cool white light. $P_{\text{sigC}}$-YFP in wild type is upregulated by twofold between light conditions. A smaller fold change of 1.2 is seen in the $\Delta \text{sigC}$ deletion mutant. In the higher light condition, 1,003 cells from two movies were collected for the wild-type strain, whereas 920 cells from two movies were collected for the $\Delta \text{sigC}$ deletion strain.

Source data are available online for this figure.
Figure EV4. Double peaks in $P_{rpoD}$-YFP expression are dependent on sigC.

A Measure of the distance between the first peak in each circadian cycle and the following peak shows only a subfraction of cells display a double peak. 947 cells from 12 movies (with up to 272 cells per time point) were collected.

B Single-cell lineages of a representative movie show that all lineages show either a second peak, or a shoulderlike feature, in $P_{rpoD}$-YFP levels.

C In the sigC deletion mutant, the two-peak oscillations are abolished. 1,352 cells from seven movies (with up to 502 cells per time point) were collected.

D Single-cell lineages of a representative movie show a single peak of $P_{rpoD}$-YFP.

Source data are available online for this figure.