



FIG S1. Photoinhibition of the control, ΔsigB and ΔsigD strains. (A) Cell cultures were illuminated at the PPFD of $1500 \mu\text{mol m}^{-2}\text{s}^{-1}$ and light saturated PSII activity was measured after 0, 15 min, 30 min and 45 min of illumination with a Clark-type oxygen electrode at 32°C using 0.7 mM 2,6-dichlorobenzquinone as artificial electron acceptor. PSII activity is expressed as percentage of the activity measured from non-treated control samples. Each data point represents an average of three independent experiments and the error bars denote SE. (B) Representative Northern blot showing *psbA* mRNAs after 0, 15 and 45 min treatment at the PPFD of $1500 \mu\text{mol m}^{-2}\text{s}^{-1}$. RNA isolations and Northern hybridizations were performed as described in Tyystjärvi et al. (2001) Mol. Microbiol. 40:476-484. $5 \mu\text{g}$ of total RNA was loaded in each well.