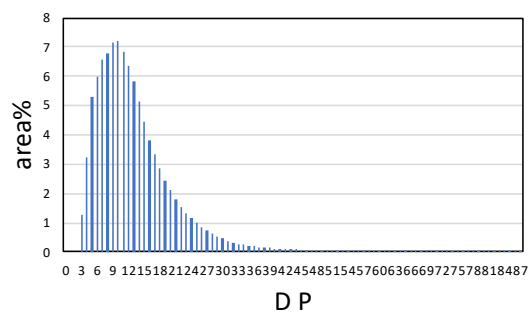
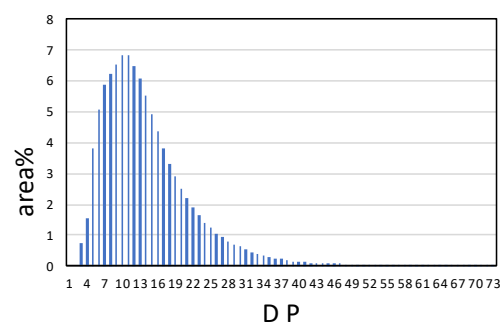
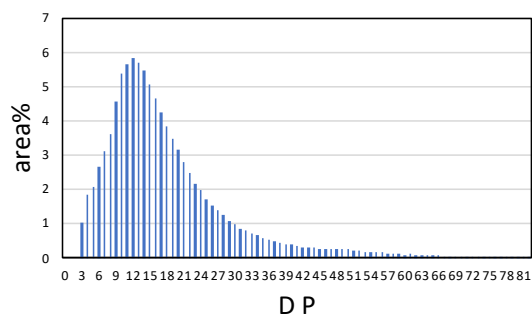


**Fig. S1.** Expression of the *CMI294C* and *CMS197C* genes under dark and light conditions in the control and the  $\Delta CMI294C$  and  $\Delta CMS197C$  strains. Cells grown in light were transferred to dark conditions for 12 h and then back to light conditions. The mRNA levels were measured by quantitative real-time PCR, and the mRNA levels of individual genes are plotted relative to those at 0 h.

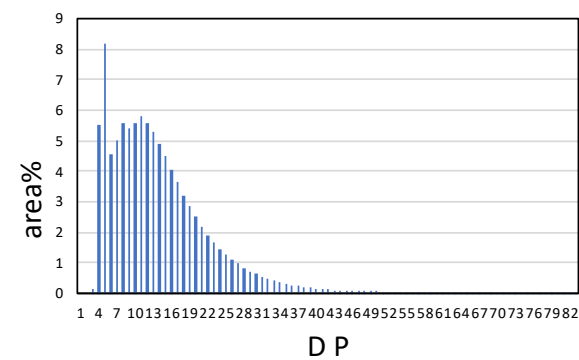
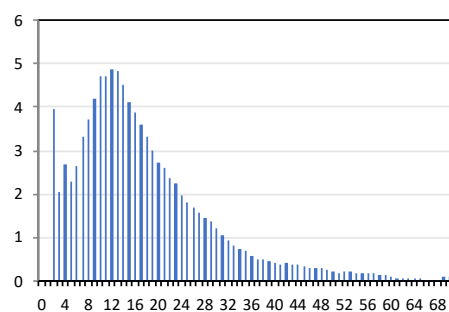
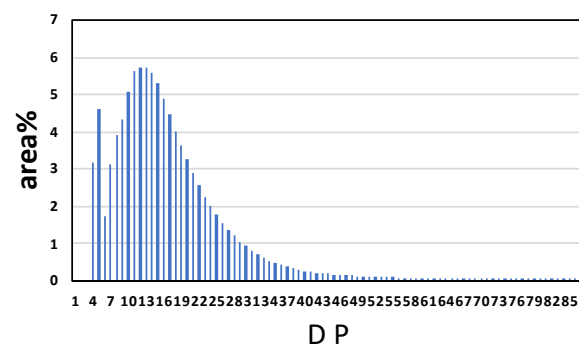
**a** Control

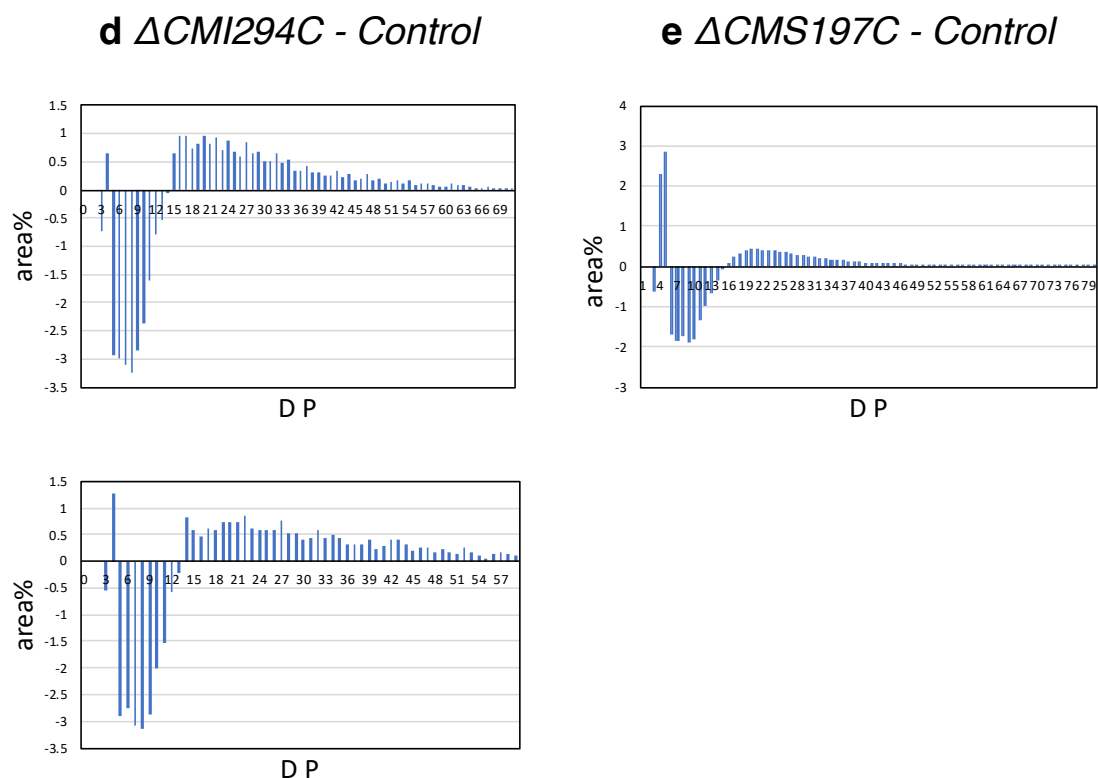


**b**  $\Delta CMI294C$



**c**  $\Delta CMS197C$





**Fig. S2.** Supplementary data of Fig. 7. Comparison of the chain-length distribution between starch from the control strain and those from the  $\Delta CMI294C$  and  $\Delta CMS197C$  strains. Starch samples were isolated from late-log phase cells grown under continuous illumination with constant air bubbling containing 2% CO<sub>2</sub>. The chain-length profiles (a–c) and differences in chain-length profiles (d, e) are shown. The abundance of chains with individual degrees of polymerization (DP) was plotted as area % of the chromatograms obtained by the capillary electrophoresis.