



**Figure 1**

FR-dependent P700 oxidation kinetics after electron sink activation and the changes in the double Gompertz-fitted parameters with increasing FR light intensity. The P700 oxidation kinetics in WT (a), *Flv<sub>ex</sub>*(b), and *Flv<sub>ex</sub> × pgr5* were obtained from three biologically independent samples, and the averaged data are shown. The gray bars above the figure indicate the dark period and the red bars indicate the period of FR illumination. The yellow bars indicate the saturation pulse illumination at that time. From the P700 oxidation kinetics,  $k_{\text{fast}}$  (d),  $\Delta\text{P700}^+_{\text{fast}}$  (e),  $T_{\text{fast}}$  (f),  $k_{\text{slow}}$  (g),  $\Delta\text{P700}^+_{\text{slow}}$  (h), and  $T_{\text{slow}}$  (i) were calculated by fitting the P700 oxidation kinetics to the double Gompertz function described in the main text. Data are shown as means with standard errors from independent biological replicates ( $n = 3$ ).