SUPPLEMENTAL DATA

Figure S1

Fluorescence emission spectra analysis on Lhcb5 mutants on Chl binding sites. Fluorescence emission spectra were recorded at three different excitation wavelength for each spectra, 440, 475 and 500nm, as indicated in the text, exciting mainly Chl a, Chl b and Cars respectively. Spectra had been normalized to the maximum. The spectra were essentially identical irrespective of excitation wavelength, implying energy transfer and equilibration between all the bound pigments. Only in the case of mutant E129V some Chl b emission was detected at 655 nm, indicating that a fraction of energy absorbed by Chl b cannot be transferred to Chl a.

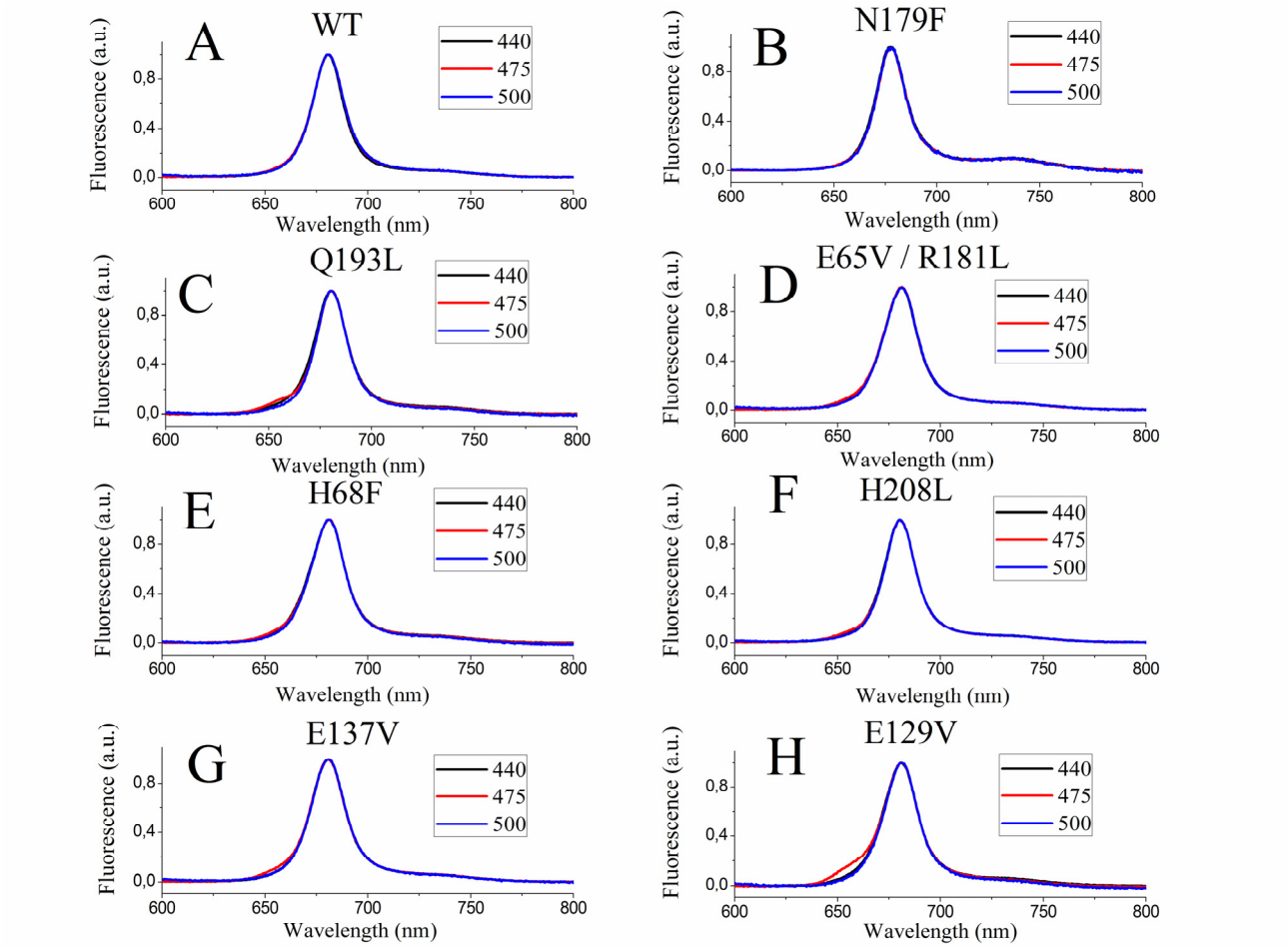

Figure S2

Fluorescence emission spectra analysis on Lhcb5 variants with different xanthophyll composition. Fluorescence emission spectra were recorded at three different excitation wavelength for each spectra, 440, 475 and 500nm, as indicated in the text, exciting mainly Chl a, Chl b and Cars respectively. Spectra had been normalized to the maximum. The spectra were essentially identical irrespective of excitation wavelength, implying energy transfer and equilibration between all the bound pigments. Only in the case of Lhcb5-Z some Chl b emission was detected at 655 nm, indicating that a fraction of energy absorbed by Chl b cannot be transferred to Chl a.