

Functional modulation of LHCSR1 protein from *Physcomitrella patens* by zeaxanthin binding and low pH

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SUPPLEMENTAL DATA

Table S1: Results of global analysis of fluorescence decay kinetics on LHCII isolated proteins. 2D

Streak camera maps were fitted with two exponential function with a global analysis method. Amplitude and time constants are reported. Average fluorescence lifetimes were calculated as $\sum A_i \tau_i / \sum A_i$

SAMPLE	A1	τ_1 (ps)	A2	τ_1 (ps)	τ_{avg} (ps)
LHCII pH 7.5 0.03% a-DM	16%	241	84%	3753	3195
LHCII pH 5 0.03% a-DM	19%	297	81%	3933	3249
LHCII pH 7.5 0.007% a-DM	24%	304	76%	3871	2992
LHCII pH 5 0.007% a-DM	58%	407	42%	3403	1654
LHCII pH 7.5 0.003% a-DM	53%	325	47%	3069	1604
LHCII pH 5 0.003% a-DM	76%	395	24%	1373	630

Figure S1: Fluorescence decay kinetics and integrated spectra of LHCII at different pH and detergent concentration. Fluorescence decay kinetics were measured at three detergent concentrations (0.03%, 0.007% and 0.003% α -DM, Panels A, C and E respectively) at two different pH (7.5 and 5). Integrated spectra are reported in Panel B, D and E.

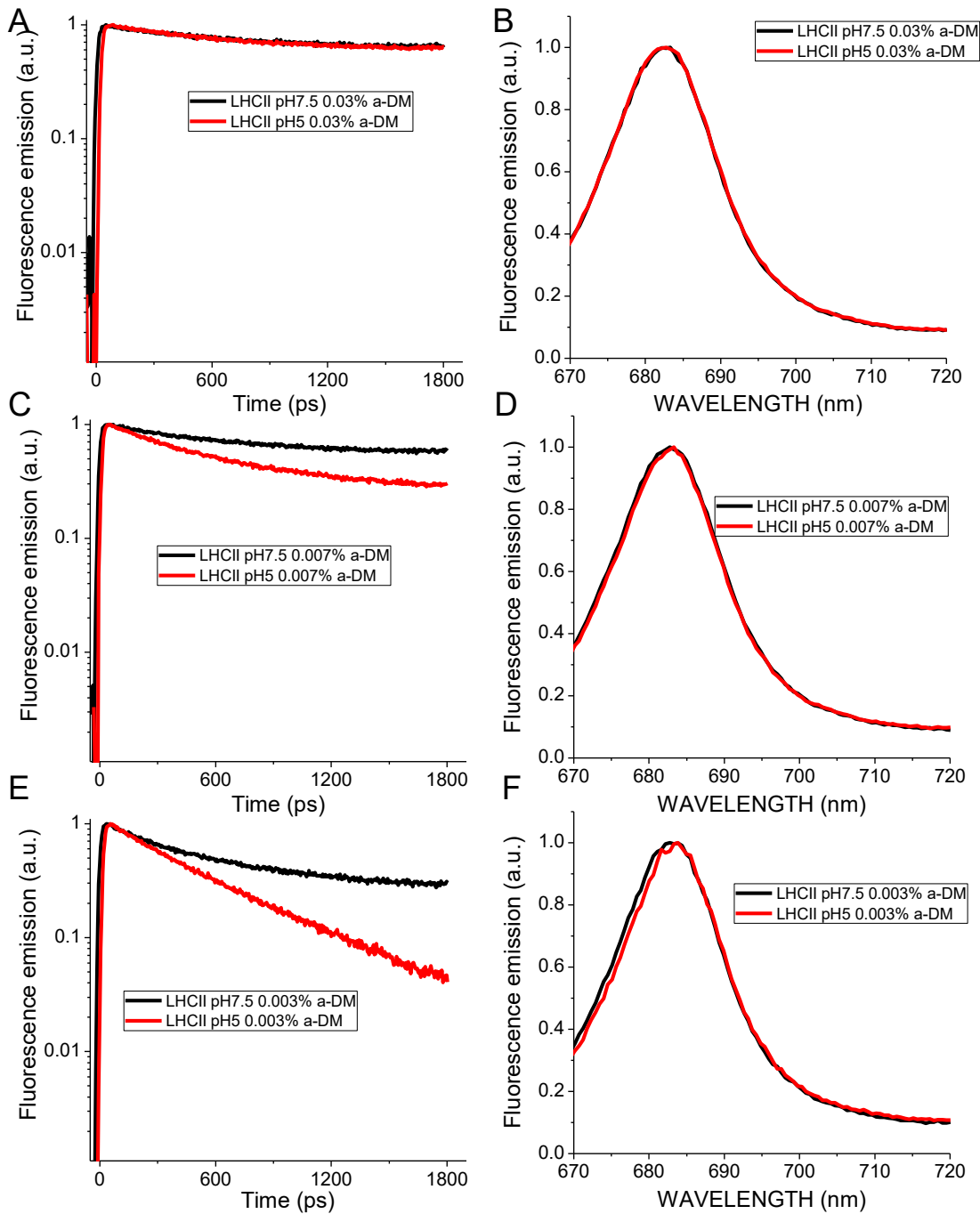


Figure S2: Decay Associated Spectra (DAS) resulting from global analysis of LHCII fluorescence decay maps. Streak camera fluorescence decay maps recorded for LHCII at different detergent concentration (0.03%, 0.007% and 0.003% α -DM) and pH (7.5 and 5) were fitted with a global analysis method with two exponential functions. DAS obtained are reported, in dashed line the longest component and in solid line the shortest.

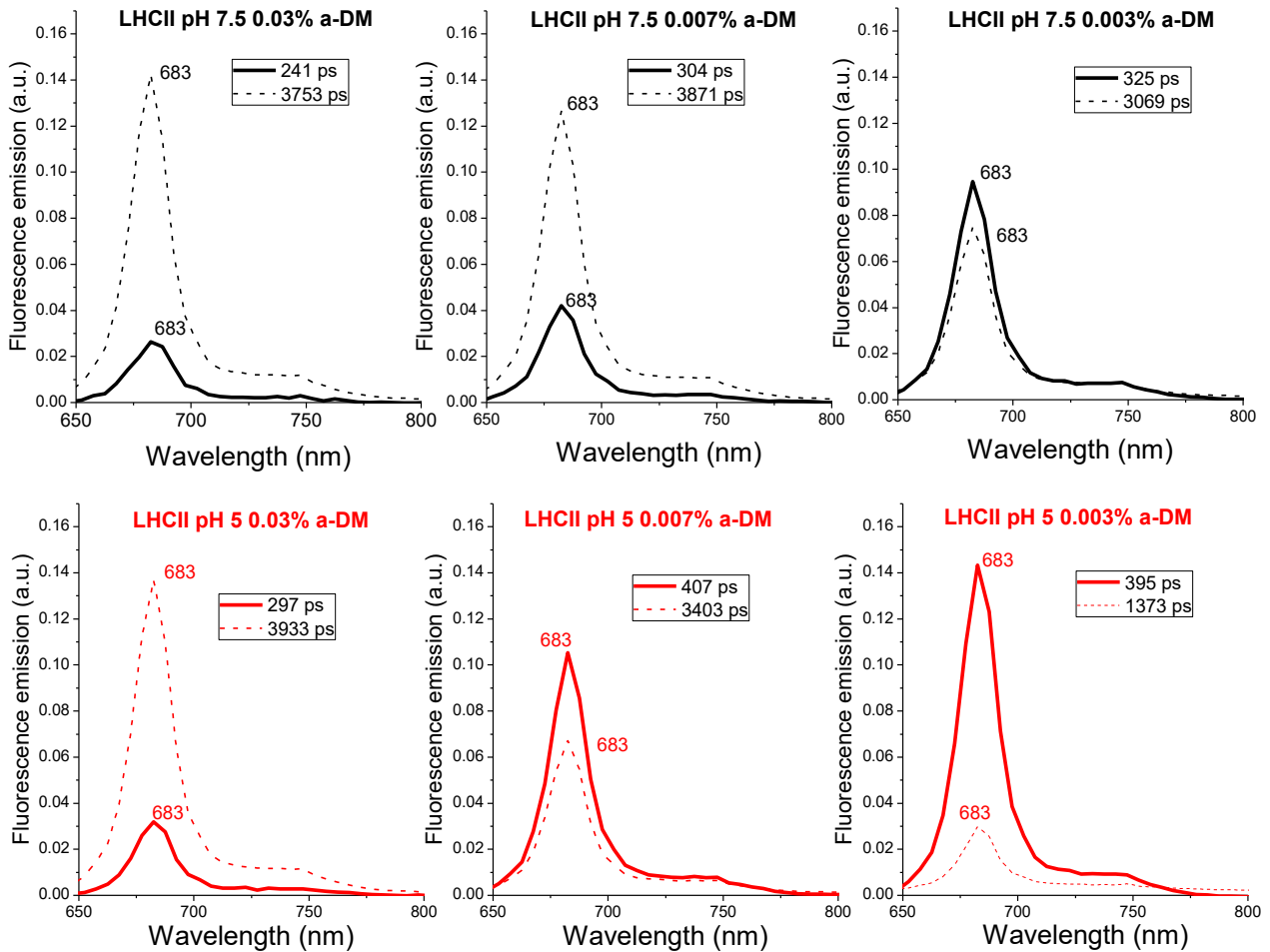


Figure S3: Deconvolution of LHCSR1 absorption spectra in Qy region. LHCSR1-ctrl and -dep absorption spectra in the red region at pH 7.5 or pH 5 at 0.003% or 0.007% were fitted with three chlorophyll b and seven chlorophyll a spectral forms. The amplitude of the chlorophylls spectral forms are reported in Panel I and J for LHCSR1-ctrl and -dep respectively.

