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Supplemental Information

Effect of an Intrinsically Disordered Plant Stress Protein on the Properties of Water

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Supporting Material

Table S1. PD₅₀, R_h and d_{io} of compounds used in the fit of eqn. 10.

Compound	PD₅₀ (μM)	R_h (Å)	d_{io}
K ₂	122.3	18.90	0.00
K ₄	61.2	30.20	3.35
K ₁₀	26.6	49.30	9.81
PEG-1000	662.0	7.48	1.41
PEG-8000	24.0	24.55	1.33
PEG-10,000	33.2	27.88	2.01

Sequence of K₂ (Mr 5381.25)

MKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAH

Sequence of K₄ (Mr 13144.04)

MKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAHLDRKDEQKQTSATSTP
GGQMKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAHLE

Sequence of K₁₀ (Mr 35705.58)

MKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAHLDRKDEQKQTSATSTP
GGQMKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAHLDRKDEQKQTS
TSTPGQGQMKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAHLDRKDEQK
QTSATSTPGQGQMKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAHLDRK
DEQKQTSATSTPGQGQMKEKIKERIPGMGRKDEQKQTSATSTPGQGQQQKGMMEKIKEKLPGAH
LE

Sequence of HSPB6 (Mr 17135.60)

MEIPVPVQPSWLRRASAPLPGLSAPGRFLDQRFGEGLLEAELAALCPTTLAPYYLRAPSVALPV
AQVPTDPGHFSVLLDVKHFSPEEIAVKVVGHEVHARHEERPDEHGFVAREFHRRYRLPPGVD
PAAVTSALSPEGVLSIQAAPASAQAPPPAAAK

Sequence of ELP (Mr 17063.21)

MGH (GVGVP)₄₀GWP

Figure S1. Dehydrin and Control Protein Sequences

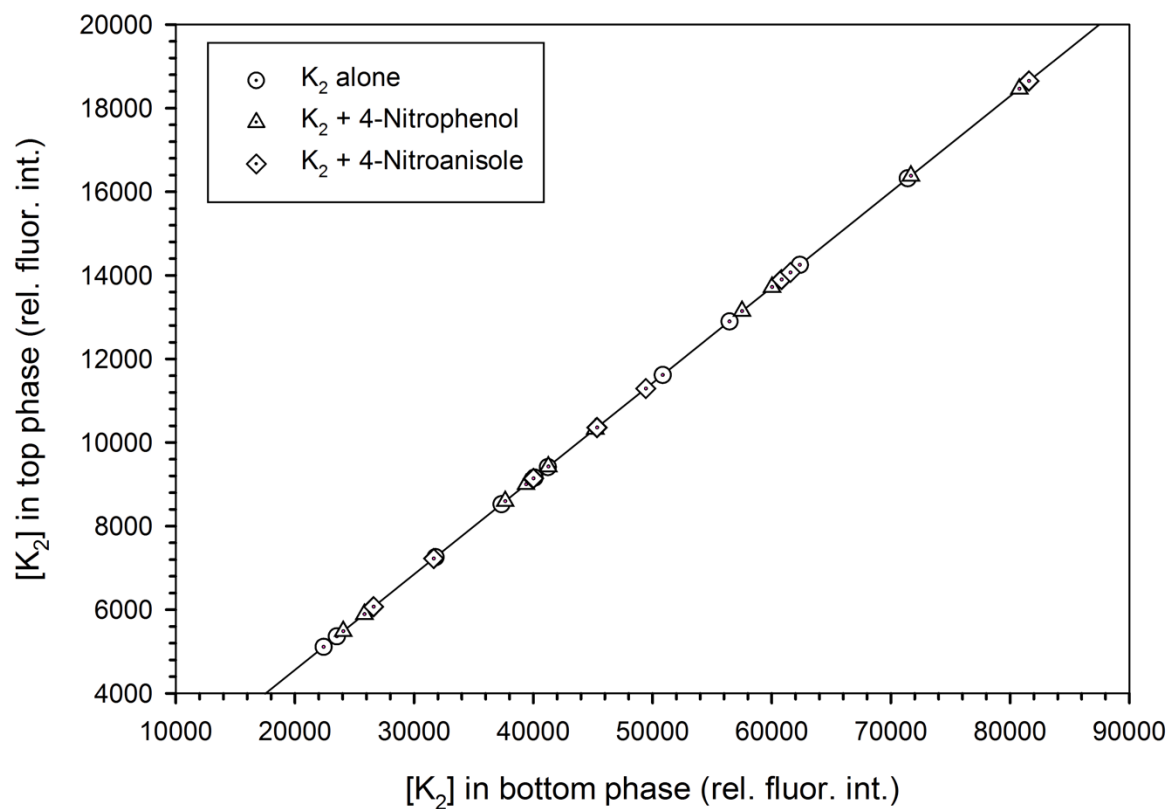


Figure S2. K₂ distribution is unaffected by the presence of the dyes. Partitioning of K₂ dehydrin in the presence and absence of 4-nitrophenol and 4-nitroanisole in the top and bottom phases of aqueous Ficoll-70/PEG-8000/0.01 M sodium phosphate buffer. The slope of the linear curve represents the partition coefficient of the K₂ dehydrin. K₂ alone, dotted circle; K₂ with 4-nitrophenol, dotted triangle; K₂ with 4-nitroanisole, dotted diamond.

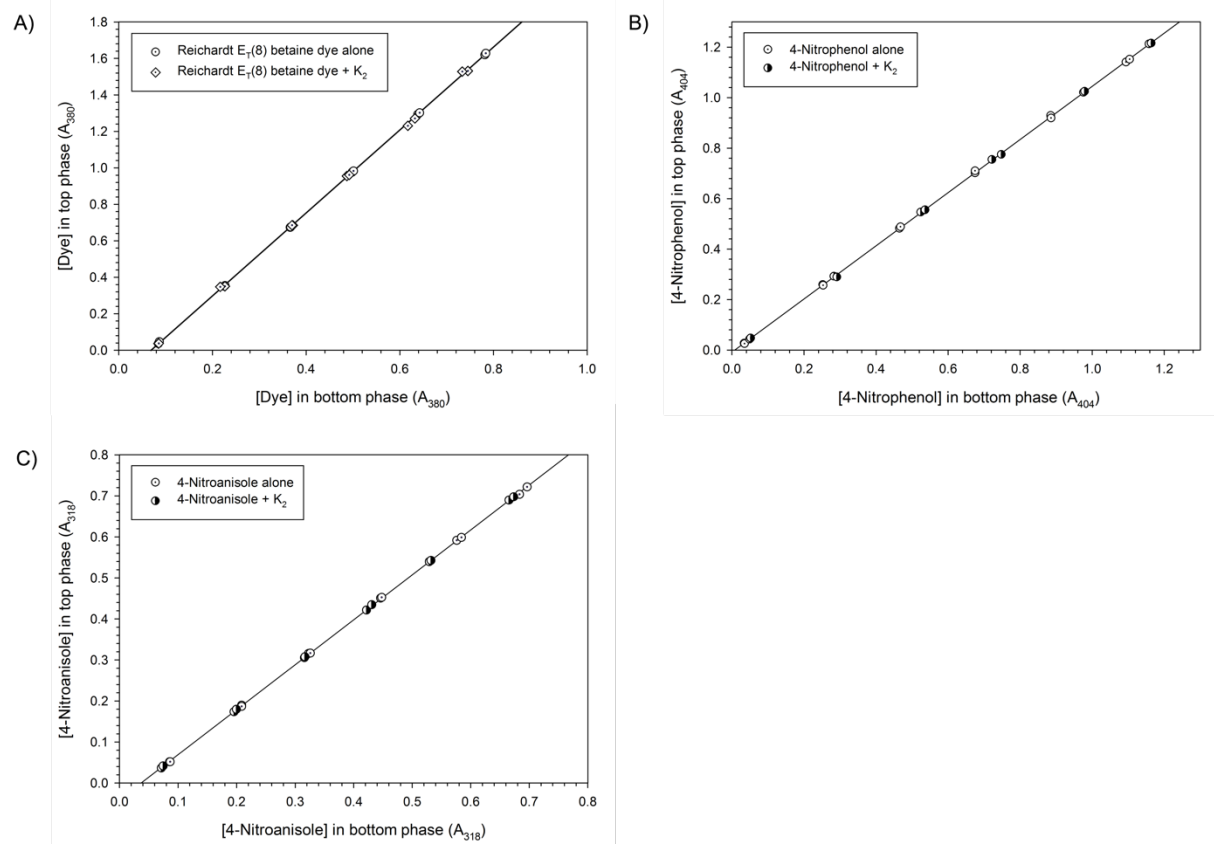


Figure S3. Dye distribution is unaffected by the presence of K_2 . A) Concentration of the carboxylated Reichardt's betaine in the top and bottom phases of aqueous Ficoll-70/PEG-8000/0.01 M sodium phosphate buffer. B) Concentration of 4-nitrophenol in the top and bottom phases of aqueous Ficoll-70/PEG-8000/0.01 M sodium phosphate buffer. C) Concentration of 4-nitroanisole in the top and bottom phases of aqueous Ficoll-70/PEG-8000/0.01 M sodium phosphate buffer. The slopes of the linear curves represent the partition coefficient of each dye. The definition of the symbols is indicated in each panel.