
Blue Flickers of Hope: Secondary Structure, Dynamics and Putative
Dimerisation Interface of the Blue-Light Receptor YtvA from *Bacillus
subtilis*

SUPPLEMENTARY MATERIAL

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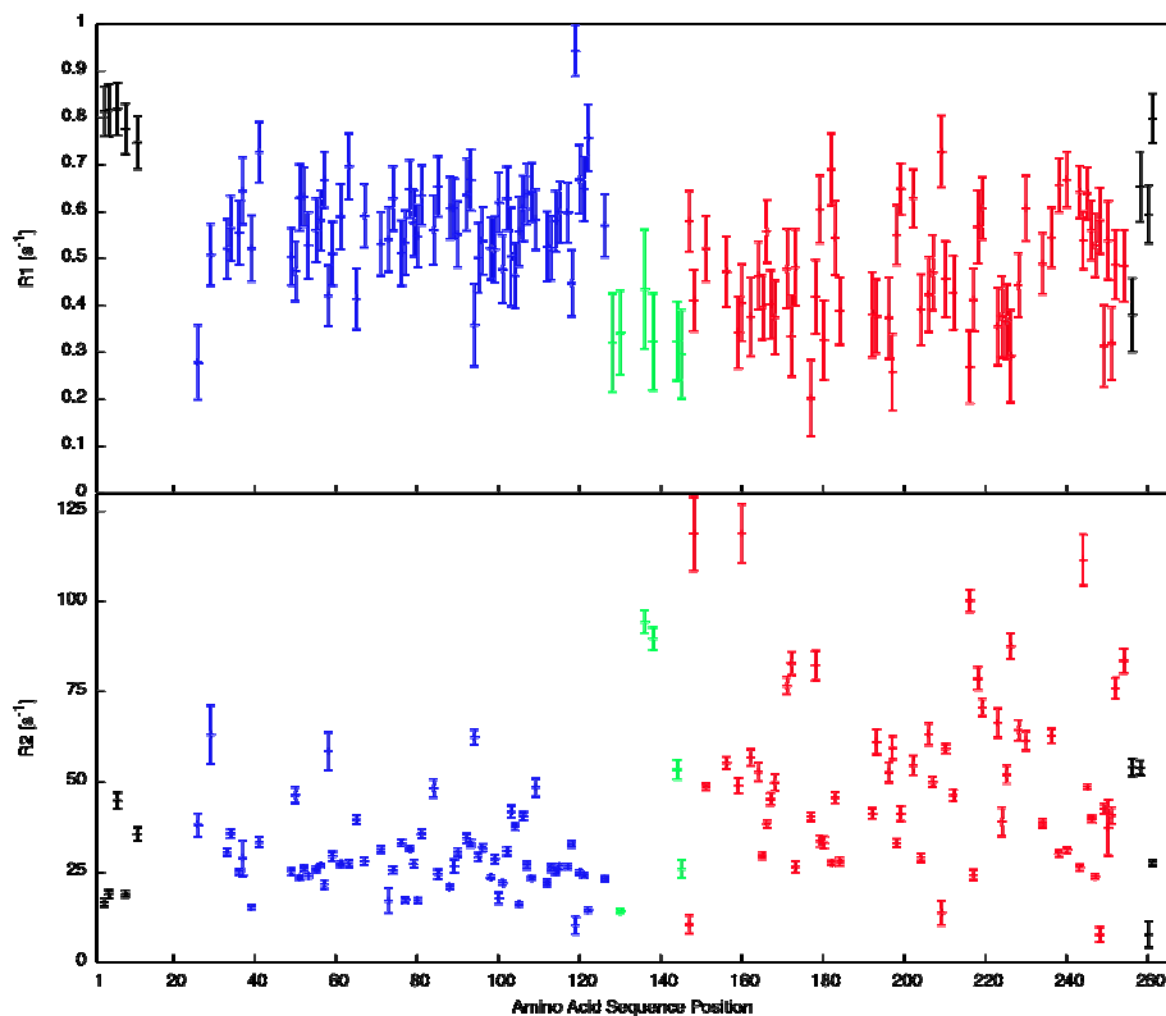


Fig. S1: Relaxation data for DN-YtvA in the dark state. Longitudinal (R1; top) and transverse (R2; bottom) ^{15}N relaxation rates are plotted against sequence position. The graphical representation highlights the multi-domain character of YtvA with different dynamics of LOV (blue), J α (green) and STAS (red). The flexible N- and C-termini are also displayed (black). All data were acquired at 600 MHz.

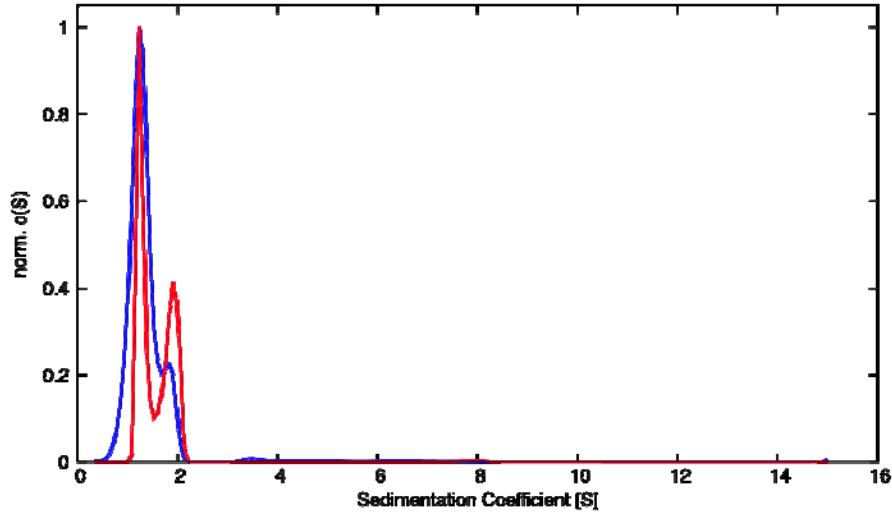


Fig. S2: AUC results obtained for YtvA-STAS showing that the sole STAS forms dimers in solution. A distribution of sedimentation coefficients is plotted which is derived from sedimentation velocity data acquired at 12 °C and 50.000 rpm for 79 μM (blue) and 316 μM (red) of YtvA-STAS (STAS G+148-261). Two species at 1.2 and 1.9 S are present, corresponding to monomeric and dimeric STAS, respectively. Experiments and preparation of YtvA-STAS was performed as described elsewhere (1) and (Dorn *et al.*, 2011, in preparation), respectively).

Table S1: Overview of identified H_N-H_N-NOEs of of full-length YtvA. NOEs listed were reciprocally identified. Mean distances and associated errors were estimated using CCPN ¹⁵N-NOESY recorded for DN YtvA at 600 MHz (2).

Residue A		Residue B		Mean Distance [Å]	Deviation [Å]
HN	3	HN	4	3.75	0.25
HN	4	HN	5	3.25	0.25
HN	17	HN	15	4.75	0.25
HN	17	HN	16	3.25	0.25
HN	20	HN	21	3.75	0.25
HN	27	HN	26	4.75	0.25
HN	28	HN	121	3.25	0.25
HN	28	HN	27	5.25	0.25
HN	28	HN	29	4.75	0.25
HN	29	HN	30	4.75	0.25
HN	30	HN	119	2.75	0.25
HN	30	HN	31	4.25	0.25
HN	33	HN	37	4.25	0.25
HN	34	HN	33	2.75	0.25
HN	34	HN	36	4.75	0.25
HN	34	HN	37	3.75	0.25
HN	35	HN	36	3.25	0.25
HN	36	HN	37	2.75	0.25
HN	39	HN	31	5.25	0.25
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HN	50	HN	52	4.25	0.25
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HN	51	HN	97	4.75	0.25
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HN	53	HN	57	4.25	0.25

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HN	54	HN	57	4.75	0.25
HN	54	HN	58	4.75	0.25
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HN	55	HN	58	4.25	0.25
HN	56	HN	53	3.25	0.25
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HN	57	HN	58	3.25	0.25
HN	59	HN	39	3.75	0.25
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HN	65	HN	64	3.25	0.25
HN	65	HN	66	2.75	0.25
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HN	258	HN	257	2.75	0.25
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