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**Supporting information for article:**

**Expression, purification and crystallization of the photosensory module of phytochrome B (phyB) from *Sorghum bicolor***

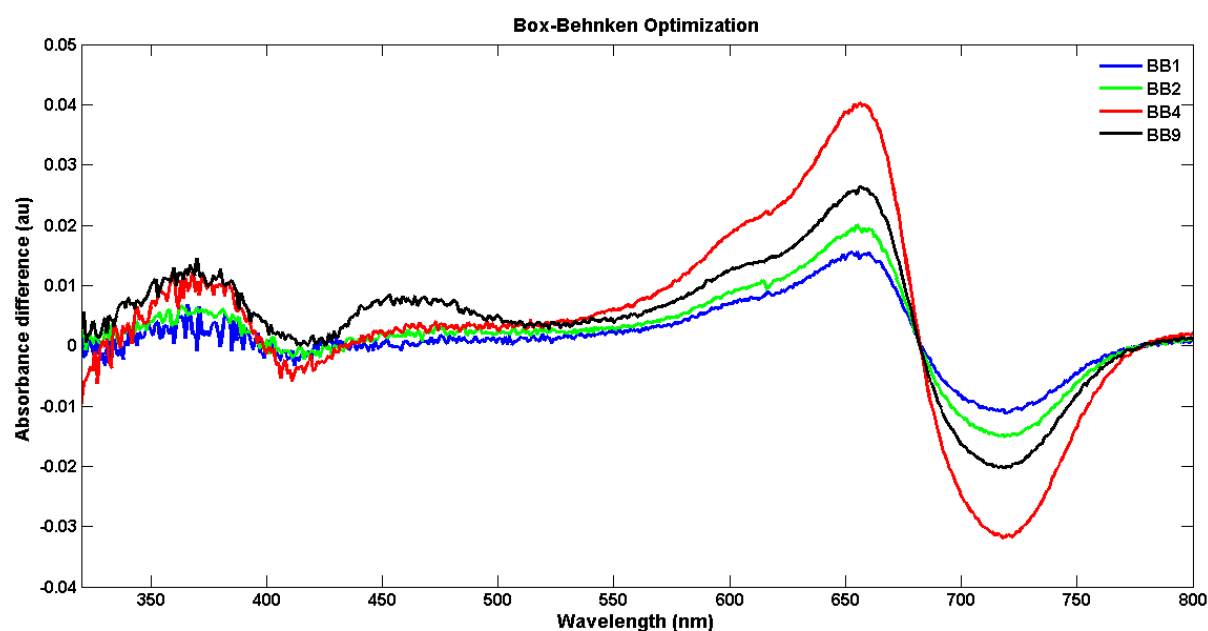
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**Table S1** List of protein sequences used in the present study

<b>Construct</b>	<b>Protein sequence</b>
NPGP-H <sub>6</sub>	MASGSRATPTRSPSSARPEAPRHAHHHHHHHSQSSGGSTSRAGGGGGGGGGGGTAATATATATES VSKAVAQYTLDARLHAVFEQSGASGRSFDYSQSLRAPPTPSSEQIAAYLSRIQRGGHIQPFGCTLAV ADDSSFRLAFSENAADLLDLSPHHSVPSLDSAAPPPVSLGADARLLFSPSSAVLLERAFARAAREISLLN PLWIHSRVSSKPFYAILHRIDVGVVIDLEPARTEDPALSIAGAVQSQKLAVRAISRLQALPGGDIKLLC DTVVEHVRELTGYDRVMVYRFHEDEHGEVVAESRRDNLEPYLGLHYPATDIPQASRFLFRQNRVR MIADCHATPVRVIQDPGMSQPLCLVGSTLRAPHGCHAQYMANMGSIASLVMAVISSGGDDEQTGR GGISSAMKLWGLVVCHHTSPRCIPFLRYACEFLMQAFGLQLNMELQLAHQLSEKHILRTQTLLCD MLLRDSPTGIVTQSPSIMDLVKCDGAALYYHGKYYPLGVTPTESQIKDIIWLTVCHGDSTGLSTDSL ADAGYLGAAALGDAVCGMAVAYITPSDYLFWFRSHTAKEIKWGGAKHHHPEDKDDGQRMHPRSSF KAFLEVVKSRSLPWENAEMDAIHSLLQLILRDSFRDAAEGTSNSKAI VNGQVQLGHHHHHHH
PGP-H <sub>6</sub>	MAAYLSRIQRGGHIQPFGCTLAVADDSSFRLAFSENAADLLDLSPHHSVPSLDSAAPPPVSLGADA RLLFSPSSAVLLERAFARAAREISLLNPLWIHSRVSSKPFYAILHRIDVGVVIDLEPARTEDPALSIAGAVQ SQKLAVRAISRLQALPGGDIKLLCDTVVEHVRELTGYDRVMVYRFHEDEHGEVVAESRRDNLEPYL GLHYPATDIPQASRFLFRQNRVRMIADCHATPVRVIQDPGMSQPLCLVGSTLRAPHGCHAQYMANM GSIASLVMAVISSGGDDEQTGRGGISSAMKLWGLVVCHHTSPRCIPFLRYACEFLMQAFGLQLNM ELQLAHQLSEKHILRTQTLLCDMLLRDSPTGIVTQSPSIMDLVKCDGAALYYHGKYYPLGVTPTESQI KDIIWLTVCHGDSTGLSTDSLADAGYLGAAALGDAVCGMAVAYITPSDYLFWFRSHTAKEIKWG GAKHHHPEDKDDGQRMHPRSSFKAFLEVVKSRSLPWENAEMDAIHSLLQLILRDSFRDAAEGTSNSKAI VNGQVQLGHHHHHHH
PG-H <sub>6</sub>	MAAYLSRIQRGGHIQPFGCTLAVADDSSFRLAFSENAADLLDLSPHHSVPSLDSAAPPPVSLGADA RLLFSPSSAVLLERAFARAAREISLLNPLWIHSRVSSKPFYAILHRIDVGVVIDLEPARTEDPALSIAGAVQ SQKLAVRAISRLQALPGGDIKLLCDTVVEHVRELTGYDRVMVYRFHEDEHGEVVAESRRDNLEPYL GLHYPATDIPQASRFLFRQNRVRMIADCHATPVRVIQDPGMSQPLCLVGSTLRAPHGCHAQYMANM GSIASLVMAVISSGGDDEQTGRGGISSAMKLWGLVVCHHTSPRCIPFLRYACEFLMQAFGLQLNM ELQLAHQLSEKHHHHHHH
H <sub>6</sub> -TEV-PG	MHHHHHHENLYFQGAAYLSRIQRGGHIQPFGCTLAVADDSSFRLAFSENAADLLDLSPHHSVPSLD SAAPPPVSLGADARLLFSPSSAVLLERAFARAAREISLLNPLWIHSRVSSKPFYAILHRIDVGVVIDLEPAR TEDPALSIAGAVQSQKLAVRAISRLQALPGGDIKLLCDTVVEHVRELTGYDRVMVYRFHEDEHGEV VAESRRDNLEPYLGLHYPATDIPQASRFLFRQNRVRMIADCHATPVRVIQDPGMSQPLCLVGSTLRA PHGCHAQYMANMGSIASLVMAVISSGGDDEQTGRGGISSAMKLWGLVVCHHTSPRCIPFLRYAC EFLMQAFGLQLNMELQL

**Table S2** List of primers used in the present study.

Direction	Sequence (5' - 3')	Purpose
F1	CCCGGTACC <u>GAATTC</u> ATTAAGAGGAGAAATTAACCATG GCTTCTGGTTCT	Addition of EcoRI site for NPGP-H <sub>6</sub>
F2	CGG <u>GAATTC</u> <i>ttaagaggagaaa</i> TTAACCATGGctGCTGCTTACC TGTCTCGTA	Addition of EcoRI site, ribosome binding site and start codon for PGP-H <sub>6</sub> and PG-H <sub>6</sub>
R1	GTAGGGA <u>AAGCTTTT</u> AgtgatgatgatgatgACCCAGCTGAACC TGACC	Addition of HindIII site, stop codon and the 3' 6xHis tag for NPGP-H <sub>6</sub> and PGP-H <sub>6</sub>
R2	GTAGGGA <u>AAGCTTTT</u> AgtgatgatgatgatgAGCCAGCTGCAGT TCCAT	Addition of HindIII site, stop codon and the 3' 6xHis tag for PG-H <sub>6</sub>
F3	TAATTAACCTAGGCTGCTGCCACC	Removal of the 3' 6xHis tag
R3	CAGCTGCAGTTCCATGTTTCAGC	
F4	GAAAATCTGTATTTTCAAGGCGCTGCTTACCTGTCTCGTA TCCAG	Addition of the 5' 6xHis tag and TEV site for H <sub>6</sub> -TEV-PG
R4	GTGATGGTGATGGTGATGCATGGTATATCTCCTTATAAA GTAAACAAAATTATTTTC	

**Figure S1** Representative difference spectra of the soluble fractions following the induction of PGP-H<sub>6</sub>-PΦB holoprotein from pPROLar vector in conjunction with p183, across different temperatures, inducer concentrations, and induction OD values as part of the Box-Behnken optimization process.