

## Modular Generation of Fluorescent Phycobiliproteins

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### Supplementary Information

(2 tables)

**Table S1: Primers for the respective DNA segments for fusion.**

Primer	Sequence	DNA
P1	5'-GCGGAATTCATATGCCAATTGACTCAGTTACAG-3'	<i>rpcG::ho1::pcyA</i>
P2	5'-GTGGATCCGAGATCTAGAACCTTTTTGTTTTCGA-3'	
P3	5'-CGCCATATGAATATTGAAGAATTTTTTGAA-3'	<i>cpcS::ho1::pcyA</i>
P4	5'-TTTAAGATCTCCACTTGATGCAGAATTAGC-3'	
P5	5'-CAGATATCCATGGTAATGACTAAAAACCCAAGAAAT-3'	<i>cpcS::ho1::pebS</i>
P6	5'-CCCCTCGAGTCATTTGTATGAAAAAAGGAA-3'	<i>cpcT::ho1::pebS</i>
P7	5'-TTGCATATGACTCACTCTACAGACATAGCC-3'	<i>cpcT::ho1::pcyA</i>
P8	5'-TTTTAGATCTTTATACTCGGCACTTATTTTGAC-3'	

**Table S2: Plasmids used.** The pACYCDuet, pCDFDuet and pET30, from Novagen, are T7 promoter expression vectors. pACYCDuet and pCDFDuet are designed to co-express two target proteins in *E. coli*. Using the three vector-derivatives together with compatible replicons and antibiotic resistance, 5 proteins could be co-expressed in the same cell, thereby generating the respective designed phycobiliproteins in *E. coli*. Subscripts indicate the strain of the parent organisms.

Antibiotic resistance	Plasmids with P15A replicon	Plasmids with CloDF13 replicon	Plasmids with ColE1 replicon
	pACYCDuet derivatives	pCDFDuet derivatives	pET30 derivatives
Kanamycin			pET-cpcB <sub>PCC7603</sub> pET-rpcG <sub>WH8102</sub> pET-cpcS <sub>PCC7120</sub> ::ho1 <sub>PCC7120</sub> ::pcyA <sub>PCC7120</sub> pET-cpcS <sub>PCC7120</sub> ::ho1 <sub>PCC7120</sub> ::pebS <sup>a</sup> pET-cpcT <sub>PCC7120</sub> ::ho1 <sub>PCC7120</sub> ::pcyA <sub>PCC7120</sub> pET-cpcT <sub>PCC7120</sub> ::ho1 <sub>PCC7120</sub> ::pebS <sup>a</sup> pET-rpcG <sub>WH8120</sub> ::ho1 <sub>PCC7120</sub> ::pcyA <sub>PCC7120</sub> pET-rpcG <sub>WH8120</sub> ::ho1 <sub>PCC7120</sub> ::pebS <sup>a</sup>
Chloramphenicol	pACYC-ho1 <sub>PCC7120</sub> ::pcyA <sub>PCC7120</sub> pACYC-ho1 <sub>PCC7120</sub> ::pebS <sup>a</sup>		
Streptomycin		pCDF-cpcB <sub>PCC7603</sub>	

		pCDF-pecA <sub>PCC7603</sub> pCDF-cpcS <sub>PCC7120</sub> pCDF-cpcT <sub>PCC7120</sub>	
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<sup>a</sup> *pebS* was synthesized according to the related gene sequence of *Prochlorococcus* phage P-SSM2 (Tang et al. 2012).