

Supplementary information

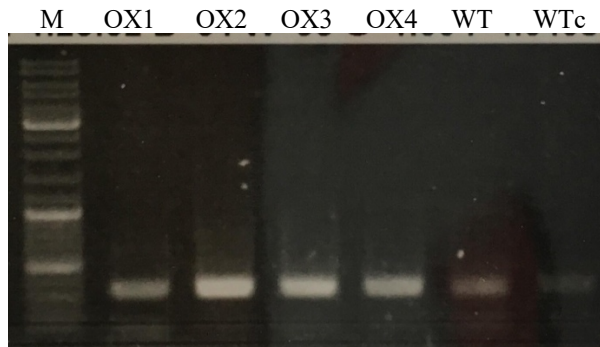
Table S1 Primers used in this study

Target gene	Name	Oligo sequences	Amplified fragment length (bp)	Annealing temperature
<i>proC</i>	ProC-F	5'-ggACTAGTTATCTCCCCGACTTAGCC-3'	1051	For PCR
	ProC-R	5'-aaCTGCAGAATCCCGTTCCTACCAAACC-3'		
<i>Cm^R</i>	Cm ^R -F	5'-CTCGAGGCTTGGATTCTCTCAC-3'	900	For PCR
	Cm ^R -R	5'-CTCGAGGCTTGGATTCTCTCAC-3'		
<i>psbA2</i>	Up_psbA2-F	5'-CTTTAGCGTTCAGTGGATATTTGC-3'	2360	For PCR
	Dw_psbA2-R	5'-TTGTAACGGGCGATCGCCTTGGCAA-3'		
<i>proC</i>	RT-ProC-F	5'- GGCTAAGGCTAAGGCCATCT-3'	315	50 °C
	RT-ProC-R	5'- CGAAAACCCATCTTCTCCAA-3'		
<i>phaA</i>	phaA-F	5'- CATGATGGTTTGACGGACAG-3'	310	50 °C
	phaA-R	5'- GACTACAGTTGCCCGCTGTT-3'		
<i>phaB</i>	RT-phaB-F	5'- ATGCCGGTATCACCAAAGA-3'	390	50 °C
	RT-phaB-R	5'- CAATTCCTCCGGTTTACCA-3'		
<i>phaC</i>	RT-phaC-F	5'- GGGCACATTTAGCCTGTGTT-3'	346	50 °C
	RT-phaC-R	5'- GTAAGTTTCCCCCGCTTGAT-3'		
<i>phaE</i>	RT-phaE-F	5'- GAGCAATATAACCGCCACCAC-3'	371	50 °C
	RT-phaE-R	5'-TCTTCCATCAAAGCAGCAAA -3'		
<i>accA</i>	RT-acc-F	5'- CGGGAAATGTTTCGGTTAGA -3'	415	55 °C
	RT-acc-R	5'- CCGCCGTTTCTAAAAATTGA-3'		
<i>ach</i>	RT-ach-F	5'- CTGGCGATCATCAAACAGCA -3'	281	60 °C
	RT-ach-R	5'-TCGTAAACCCCTTCGCTCAT -3'		
<i>ack</i>	RT-ack-F	5'- AGGCCAAAGCAGAGGGTAAT -3'	283	59 °C
	RT-ack-R	5'- AACACCGTCACCAAGGAGTC -3'		
<i>acs</i>	RT-acs-F	5'-CGGTTATTTTTGGGTCATGG -3'	339	62 °C
	RT-acs-R	5'-GAGGCTAAACTCCGCAACAG -3'		
<i>gad</i>	RT-gad-F	5'-CAGTGAAGCGGAAAGCCTAC-3'	352	60 °C
	RT-gad-R	5'- AGAACCAATGGTGGAACAGC -3'		
<i>gdhA</i>	RT- gdhA -F	5'- GCGTTTAAGTCGGGGTTACA -3'	482	61 °C
	RT- gdhA -R	5'-TTTCCCCTAAATCGCAGATG -3'		
<i>gltA</i>	RT- gltA -F	5'- ATGAATGCGTCCACCTTTTC -3'	381	52 °C
	RT- gltA -R	5'- GTCCACATTGGGGTAAATGC-3'		
<i>glgX</i>	RT- glgX -F	5'- GAGCTTCATCGAGGACGGAA- 3'	360	64 °C
	RT- glgX -R	5'- GCCCGAATTGGGGTTGCGGG - 3'		
<i>plsX</i>	RT- plsX -F	5'- AAGGGGTGGTGGAAATGGAA - 3'	467	58 °C
	RT- plsX -R	5'- AAGTACGTCCCTTCCTTCGG - 3'		
<i>putA</i>	RT-putA -F	5'- GTGATTCCCCCTGGAATTT - 3'	414	56 °C
	RT-putA -R	5'- ACCAAAGGCGGAATACACTG - 3'		
16s rRNA	RT-16 -F	5'- AGTTCTGACGGTACCTGATGA - 3'	521	55°C
	RT-16s-R	5'- GTCAAGCCTTGTAAGGTTCT - 3'		

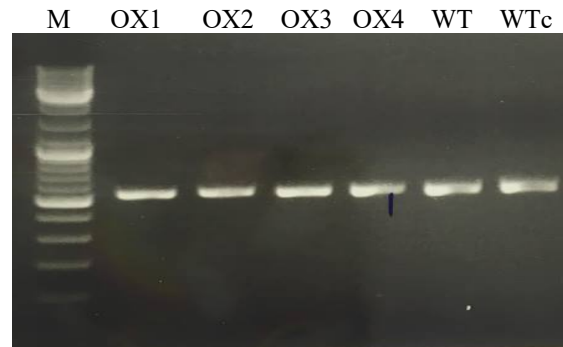
Figure S1

Agarose gel electrophoresis of RT-PCR products of *proC* transcript in *Synechocystis sp.* PCC 6803 strains grown under normal BG₁₁ condition for 6 days, shown in **Figure 2C**. The *16s* rRNA transcript was used as the reference (a size of 521 bp). *ProC* transcript size of 315 bp.

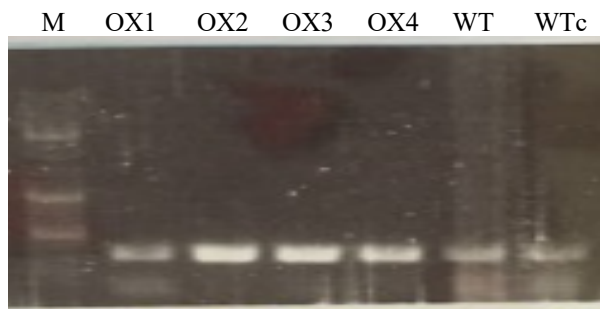
ProC gene : OXP strain



16s rRNA gene : OXP strain



ProC gene : OXP/ Δ *adc1* strain



16s rRNA gene : OXP/ Δ *adc1* strain

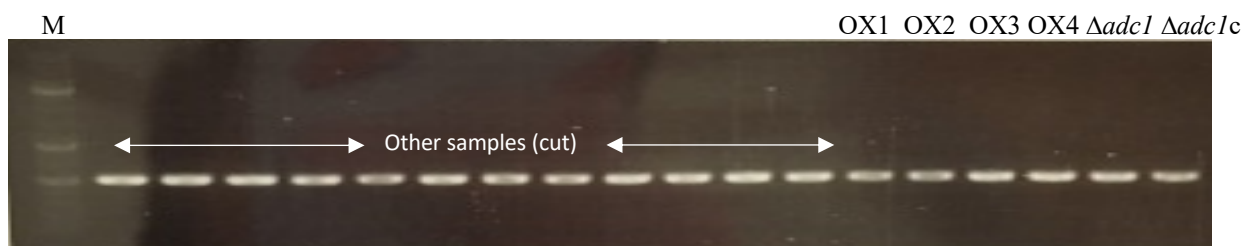
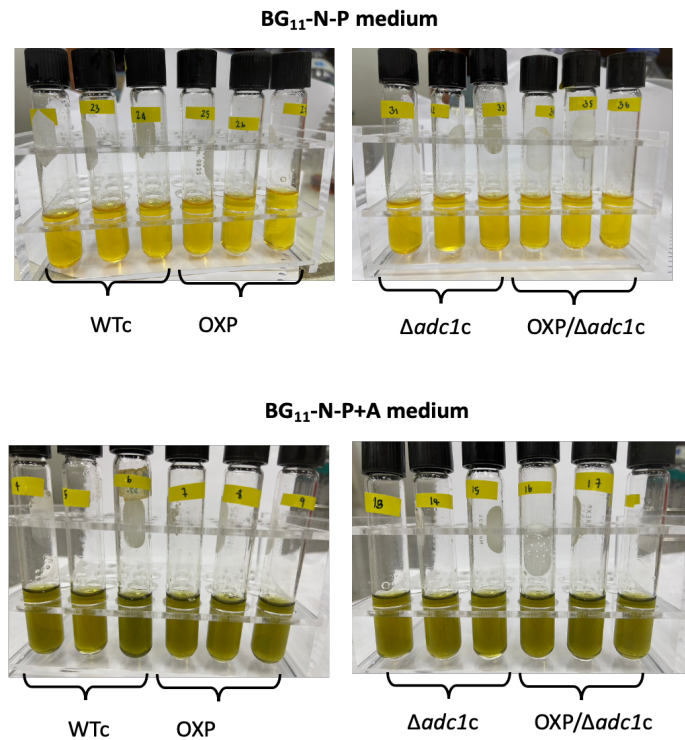


Figure S2 Acetate concentration in BG₁₁-N-P+A medium during adaptation phase of all strains. Cells were treated in BG₁₁-N-P+A medium for 11 days. Medium was sampled at days 0, 1, 3, 5, 7, 9, and 11 for determining acetate concentration (according to the method of Hutchens and Kass, 1949). The error bars represent standard deviations of means (mean $\pm$ S.D., n = 3).

A) The reaction mixture : BG₁₁-N-P and BG₁₁-N-P+A media



B) Acetate concentration in medium during adaptation phase (0.4% acetate = 48 mM)

