Supplementary Materials:

Table S1. Primers used in this experiment.

Primer name	Sequence (5'to 3')	Purpose
7942-anti-fabB/F-F	GGGTAACCCATGACTGAAACCGGACGCC	construction of
7942- anti -fabB/F-R	GGGGTACCCC CTAGGGATGGAATTTCCGGAAG	antisense
7942- anti -fabH-F	GGGTAACCCTTGACTCGACCTGGCGTTG	expression vector
7942- anti -fabH-R	GGGGTACCCCCTAAACCACCGTGCCCCAAC	for *fabB/F* (*H*) of
		Synechococcus
		sp. PCC 7942
7942-sen-fabB/F-F	GGGGTACCCCATGACTGAAACCGGACGCC	construction of
7942-sen-fabB/F-R	CCGCTCGAGCGGCTAGGGATGGAA	sense expression
	TTTCCGGAAG	vector for *fabB/F*
7942-sen-fabH-F	GGGGTACCCCTTGACTCGACCTGGCGTTG	(*H*) of
7942-sen-fabH-R	CCGCTCGAGCGGCTAAACCACCGTGCCCCAAC	*Synechococcus*sp
		. PCC 7942
7942-	TGATGGAGGACCAGCAGA	
fabB/F-qPCR-F		
7942-	TTCACCCACCGCATTAGA	
fabB/F-qPCR-R		quantitative
7942- fabH-qPCR-F	GTGAACTACGGCAATACCTCC	RT-PCR
7942- fabH-qPCR-R	CCTGCTCCAAACCCTGAA	
rnpB-F	ACCAGACTTGCTGGGTAACG	
rnpB-R	TTACCGAGCCAACACCTCTC	
7942-△fabB/F-F1	CGGAATTC ATGACTGAAACCGGACGC	construction of
7942-△fabB/F-R1	TGCAGCGATCGGGGCCTTTT	expression vector
7942-△fabB/F-F2	AAAAGGCCCCGATCGCTGCA	for *fabB/F*
	GGAGCTAAGGAAGCTAAAATG	deletion mutants
7942-△fabB/F-R2	TTATTTGTACAATTCATCCATACCA	of
7942-△fabB/F-F3	GTCTTCAAATTCCCGTTGC	*Synechococcus*
	GGCGATCGAGTTGGCGCTCC	sp. PCC 7942
7942-△fabB/F-R3	CCCAAGCTT CTAGGGATGGAATTTCCGGA	
7942-△fabB/F-F1	CGGAATTC TTGACTCGACCTGGCGTTGGCGT	construction of
7942-△fabH-R1	TTGCACTTGGCAGGCACTGC	expression vector
7942-△fabH-F2	GCAGTGCCTGCCAAGTGCAA	for *fabH* deletion
	GGAGCTAAGGAAGCTAAAATG	mutants of
7942-△fabH-R2	TTATTTGTACAATTCATCCATACCA	*Synechococcus*
7942-△fabH-F3	GTCTTCAAATTCCCGTTGC	sp. PCC 7942
	ATCCTCGAGAAGACGCTGTTCC	
7942-△fabH-R3	CCCAAGCTT CTAAACCACCGTGCCCCAAC	
7942-fabB/F-egfp-F1	TTATTTGTACAATTCATCCATACCA	construction of
7942-fabB/F-egfp-R	GGGATGGAATTTCCGGAAGG	expression vector
1		for fluorescence

7942-fabB/F-egfp-F2	CCTTCCGGAAATTCCATCCC TCTAAAGGTGAAG AATTATTCACTGG	localization
7942-fabB/F-egfp-F2	TTATTTGTACAATTCATCCATACCA	
7942-fabH-egfp-F1	TTGACTCGACCTGGCGTTG	construction of
7942-fabH-egfp-R1	AACCACCGTGCCCCAAC	expression vector
7942-fabH-egfp-F2	GTTGGGGCACGGTGGTT TCT AAAGGTGAAG AATTATTCAC	for fluorescence localization
7942-fabH-egfp-F2	TTATTTGTACAATTCATCCATACCA	
ec-fabB-F1	CGGAATTCATGAAACGTGCAGTGATTACTG	construction of
ec-fabB-R1	CCACATACGGGCCAACCGCTTT	expression vector
ec-fabB-cat-F2	AAAGCGGTTGGCCCGTATGTGGGG AGCTAAGGAAGCTAAAATG	for *fabB* deletion mutants of *E.coli*
ec-fabB-cat-R2	GCAACGGGAATTTGAAGAC	
ec-fabB-F3	GTCTTCAAATTCCCGTTGCCGAAGGCG CAGTACGCTGCA	
ec-fabB-R3	CCCAAGCTT TTAATCTTTCAGCTTGCGC	
ec-fabF-F1	CGGAATTCGTGTCTAAGCGTCGTGTAGT	construction of
ec-fabF-R1	AGAATGGGCTGATCTTACGT	expression vector
ec-fabF-cat-F2	ACGTAAGATCAGCCCATTCTGGAGCTAA GGAAGCTAAAATG	for *fabF* deletion mutants of *E.coli*
ec-fabF-cat-R2	GCAACGGGAATTTGAAGAC	
ec-fabF-F3	GTCTTCAAATTCCCGTTGCTCTGGC AATGGCAAATGCTC	
ec-fabF-R3	CCCAAGCTT TTAGATCTTTTTAAAGATCAAAGAA	
ec-fabH-F1	CGGAATT ATGTATACGAAGATTATTGGTACTG	construction of
ec-fabH-R1	CGGAATTC AATGCCCAGCATGCTTTGAA	expression vector
ec-fabH-cat-F2	TTCAAAGCATGCTGGGCATT GGAGCTAAGGAAGCTAAAATG	for *fabH* deletion mutants of *E.coli*
ec-fabH-cat-R2	GCAACGGGAATTTGAAGAC	
ec-fabH-F3	GTCTTCAAATTCCCGTTGC GAACTGGCGCACATCGTTGA	
ec-fabH-R3	CCCAAGCTT CTAGAAACGAACCAGCGC	

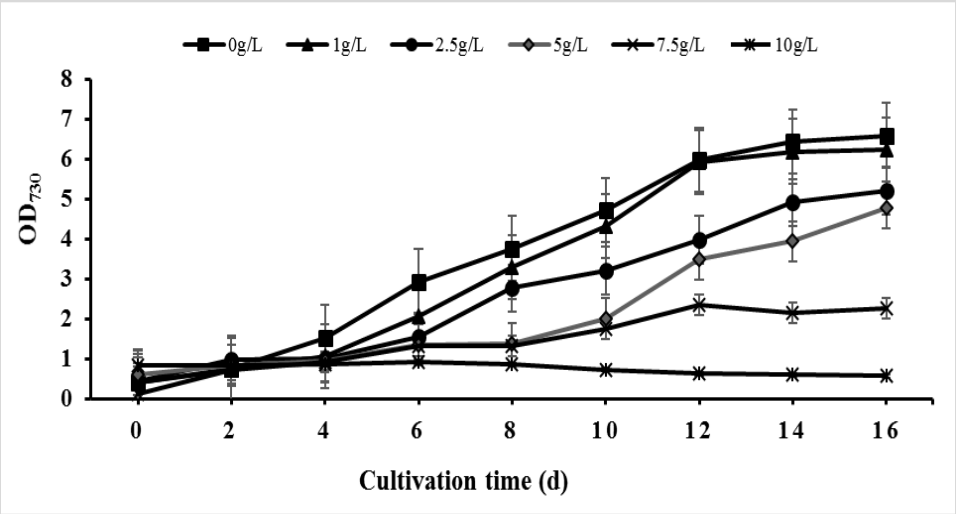


Figure S1. Effects of different cerulenin concentrations on the growth of *Synechococcus* sp. PCC 7942

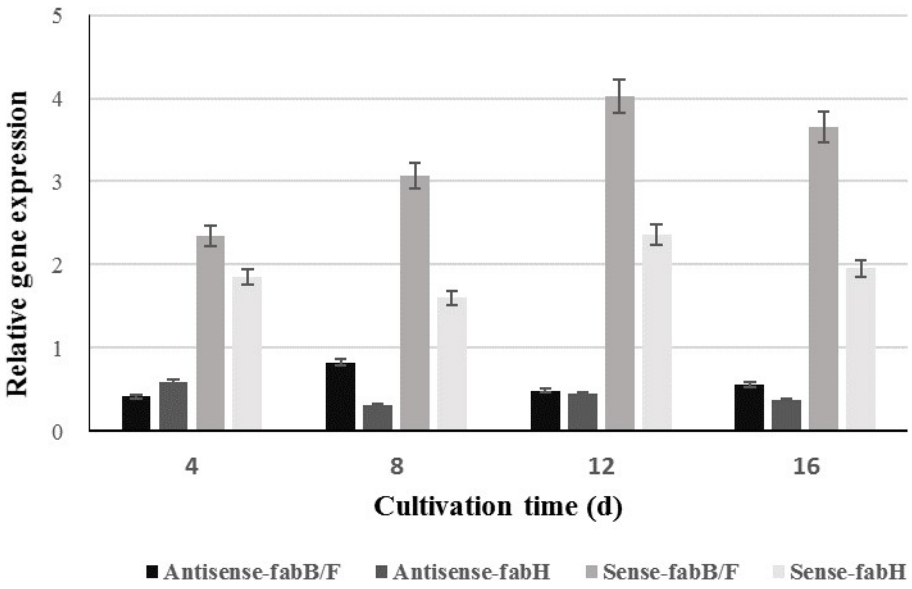
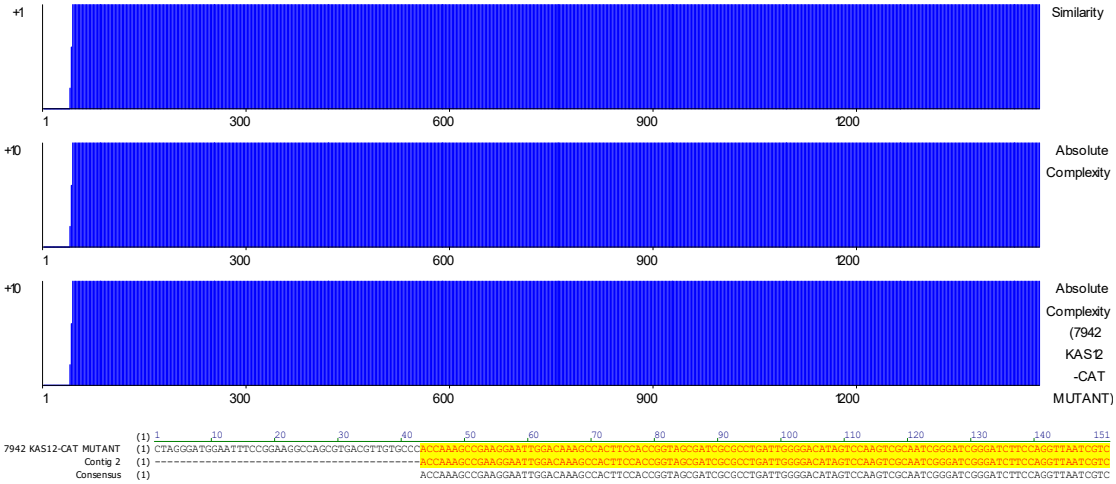


Figure S2. The expression levels of *fabB/F* and *fabH* in *Synechococcus* sp. PCC 7942 with sense and antisense expression of Synpccw7942_0537 (*fabB/F*) and Synpccw7942_1455 (*fabH*). The expression levels of Synpccw7942_0537 (*fabB/F*) and Synpccw7942_1455 (*fabH*) in wild type strain were set to 1.

(a)



(b)

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TCGCAATCGGGATCGGGATCTTCCAGGTTAATCGTCGGCGGCACCATGTCCTCAGCGAT
CGCGAGGGTTGCCGCTACCGCCTCAATTCCGCCGGAGCCCCCTAACAGGTGACCGGTC
ATCGACTTAGTCGAGCTGATCACGGTTTTGTAGGCGTGCTCACCTAGGGCTTTCTTAAT
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GTGAAAACGGGGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGA
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TCCTGCAGCGATCGGGGCCTTTTTCCAGCAAAACCGTCTGCTGGTCCTCCATCACCCTC
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CCGATCCATCCGCTTAGCATCCTTGCGGTCCATGTACTGGGTGGGGTCAAAGTCCTTGA
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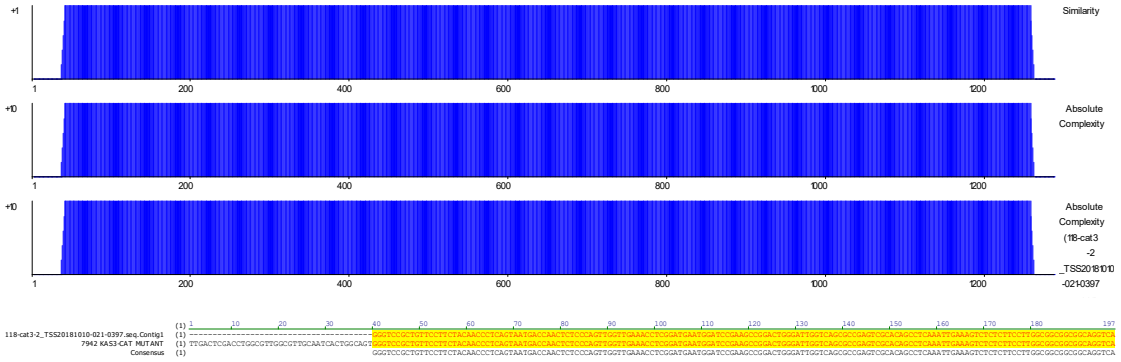
(c)



(d)

TTGACTCGACCTGGCGTTGGCGTTGCAATCACTGGCAGTGGGTCCGCTGTTCCTTCTAC
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AGCCGGACTGGGATTGGTCAGCGCCGAGTCGCACAGCCTCAAATTGAAAGTCTCTCTT
CCTTGGCGGCGGCGGCAGGTCAGTCAGCTCTCGAAGCTGCAGGGCTAGAAGCGACAT
CGGTTGATTTGATTTTGCTGGCGACGTCAACCCCCGACGATCTGTTCGGCAGTGCCTGC
CAAGTGCAAGGAGCTAAGGAAGCTAAAATGGAGAAAAAAATCACTGGATATACCACC
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CAACAGTACTGCGATGAGTGGCAGGGCGGGGCGTAATTTTTTTAAGGCAGTTATTGTCT
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TCGCCTTGATATTTCCCGTGATCGCGTACTTAGCAACTTGGTGAACTACGGCAATACCTC
CTCCGCCACGATCCCCTTGGTTTTGGATGAGGCCGTCAAAGCTGGGAAGATTCAATCG
GGCGACTTAATCGCTGCTTCAGGGTTTGGAGCAGGGTTGAGCTGGGGCGCAGCGCTGT
TCCGTTGGGGCACGGTGGTTTAG

Figure S3. DNA sequence analysis of the deletion mutants. (a) Alignment of construction of *fabB/F*-cat deletion mutation; (b) DNA fragment of *fabB/F*-cat; (c) Alignment of construction of *fabH*-cat deletion mutation; (d) DNA fragment of *fabH* -cat.