

Supplementary Material

Combination Strategy of Genetic Dereplication and Manipulation of Epigenetic Regulators Reveals A Novel Compound from Plant Endophytic Fungus

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REFERENCES

Table S1. Strains and plasmids used in this study.

Plasmids/Strains	Descriptions	References
<i>Pestalotiopsis fici</i>		
CGMCC3.15140	WT	[1]
AGL-1	<i>Agrobacterium tumefaciens</i> AGL-1	[2]
TYXW7.1	$\Delta PFICI_05127::hph$	[2]
TYXW8.1	$\Delta PFICI_08988::hph$	[2]
TYYYJ6	$\Delta PFICI_10824::G418$	This study
TYYYJ10	$\Delta PFICI_10824::G418$; $\Delta PFICI_05127::hph$	This study
TYYYJ11	$\Delta PFICI_10824::G418$; $\Delta PFICI_08988::hph$	This study
pAG1-H3-G418	<i>G418</i> in <i>pAG1-H3</i>	[3]
pYYJ1.1	<i>PFICI-10824</i> (5f+G418+3f) in pBlunt	This study

TXX = original transformant, pXX = plasmid

Table S2. Primers used in this study.

Primer name	Oligonucleotide sequence (5'-3')	Use
10824-5f-FL	CAGCTATGACCATGATTACGCCAAGCTTGGAACGCGAAGGAC ATTCGGAC	PFICI_10824 5 flanks amplification
10824-5f-RL	CGTTACTAGTGGATCCGAGCTCGGTACCATACCCTATCAGGTT CGCG	
10824-3f-FL	GAAGTTCCTATTCTCTAGAGTCGACAAGGGCCAGGTACCGATC ATACGTC	PFICI_10824 3 flanks amplification
10824-3f-RL	CCAGTGTGATGGATATCTGCAGAATTGCGAAGCAAGTGGATG GCAGCTG	
G418-F	GTACCGAGCTCGGATCCACTAG	G418 amplification
G418-R	CCTTGTCGACTCTAGAGAATAGGAAC	
10824-5f-EF	CAGGCGGATTGAAGAGTTGG	For verification and screening of PFICI_10824 deletion mutant
10824-TR	GAGCATCATATTCCTGCCGC	
10824-TF	GCATAAACACGCACTATGCC	
10824-3f-ER	CCGATTGCTACCGTAACGAG	
10824 RT-F	GCAGTGCGAGAGGAGATACG	
10824-RT-R	CAAGATCTCACCGACAACCTTGC	
05127RT_F	GAACCCAAACCCAGAACC	
05127RT_R	CGCATCCTCGAAGCTCATG	
05127_5f_EF	CGCACAAGTTATCGTGCAC	Verification of PFICI_05127 deletion mutant
05127T_R	CTATGTCAGGCACCCAGTC	
05127T_F	CTCGCCGATAGTGGAACCC	
05127_3f_ER	GACGACCTCAACCTGTC	
08988RT_F	CCCTGGAAAGCCAGACAATATG	
08988RT_R	CTGGTAGTTGCGGATGACGTC	
08988_5f_EF	GAAGGTCCGTTGGTGATG	
08988T_R	GTCCTCGTTCCTGTCTGCTA	
08988T_F	GTCCAAGCAGCAAAGAGTG	Verification of PFICI_08988 deletion mutant
08988_3f_ER	GAGCGGCAATAGAATGAGG	

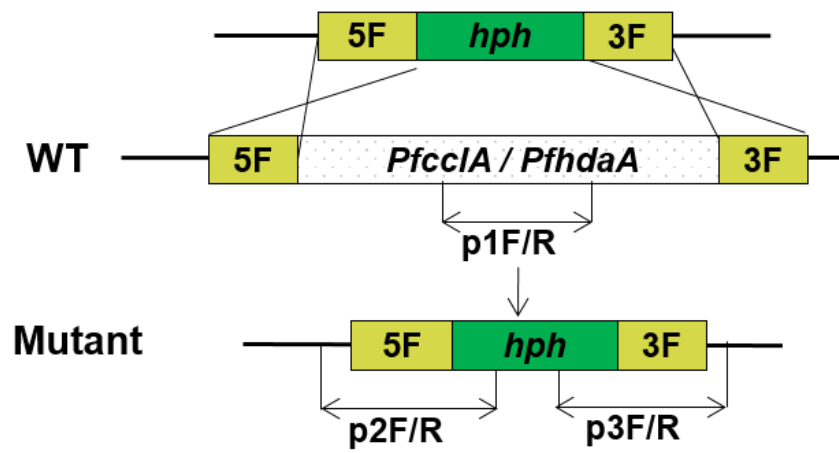


Figure S1. Schematic illustration of disruption of *PfcclA* and *PfhdaA* in *P. fici* WT strain. The primer pairs of P1_F/R, P2_F/R, P3_F/R were designed for verification [2].

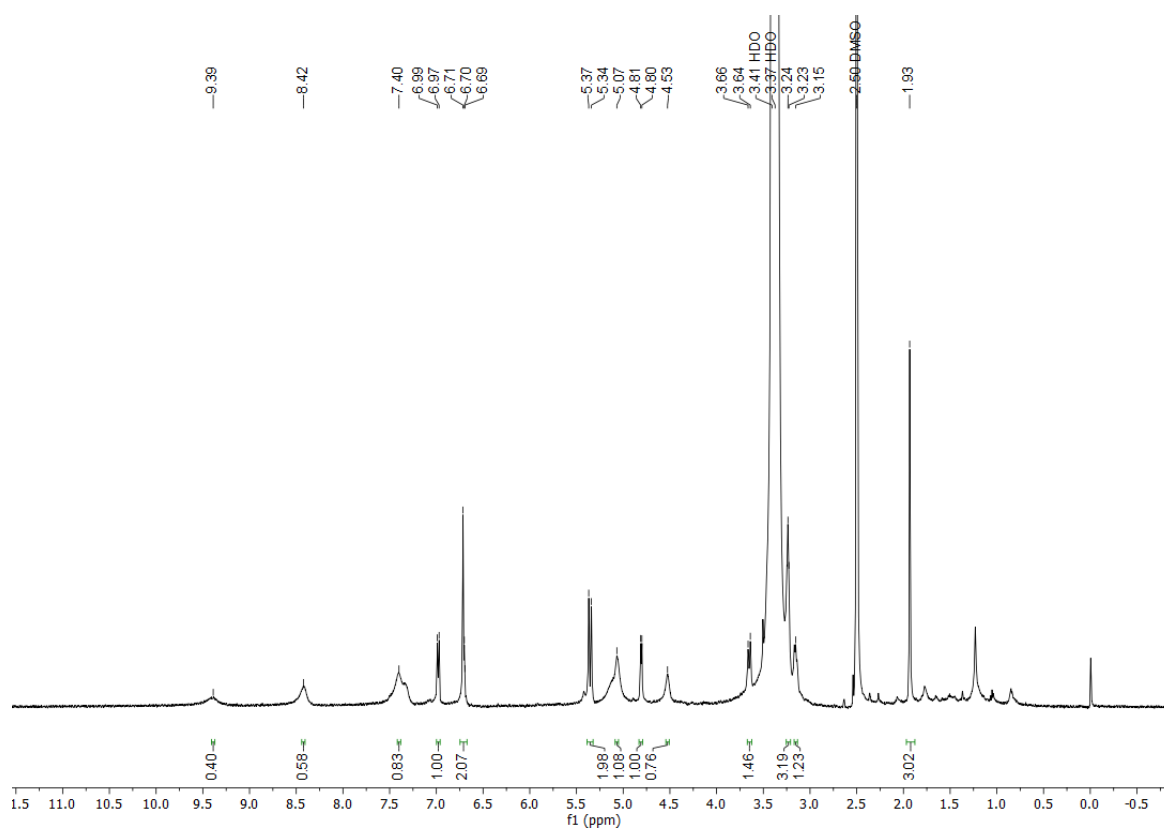


Figure S2. ¹H NMR spectrum of **1** in DMSO-*d*₆ (500 MHz).

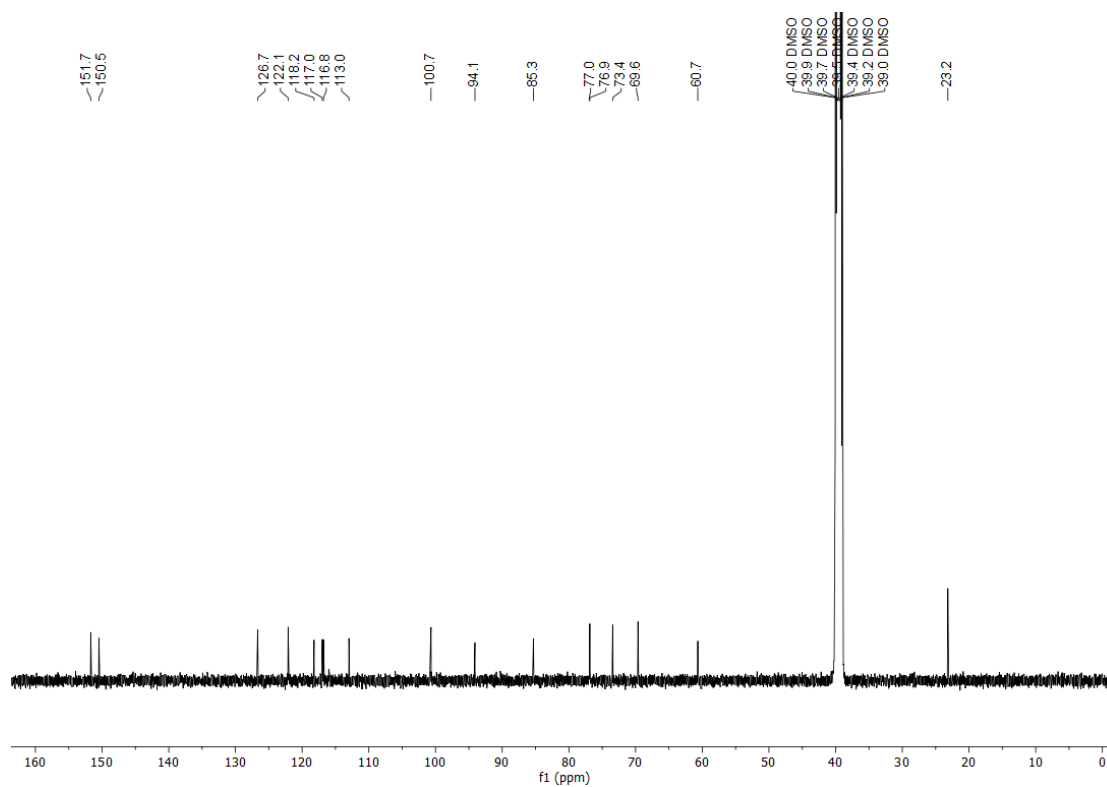


Figure S3. ¹³C NMR spectrum of **1** in DMSO-*d*₆ (125 MHz).

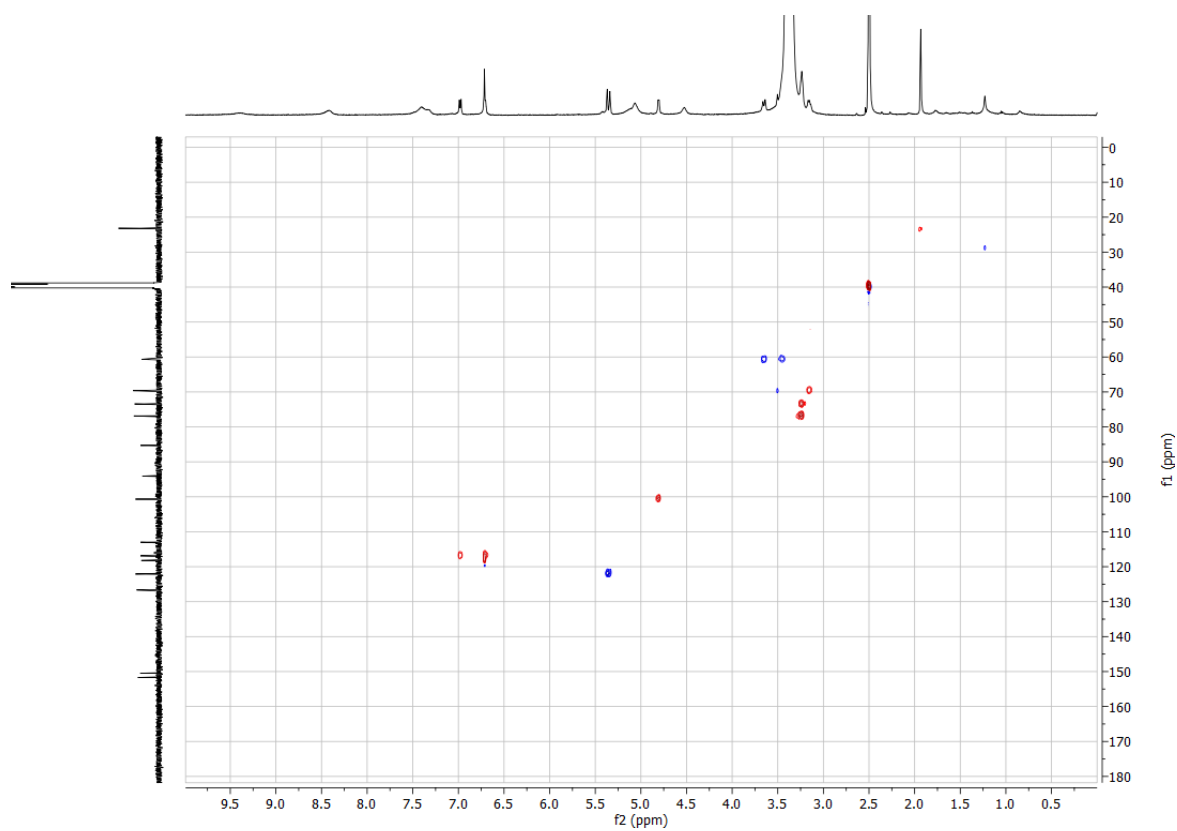


Figure S4. HSQC spectrum of **1** in DMSO- d_6 .

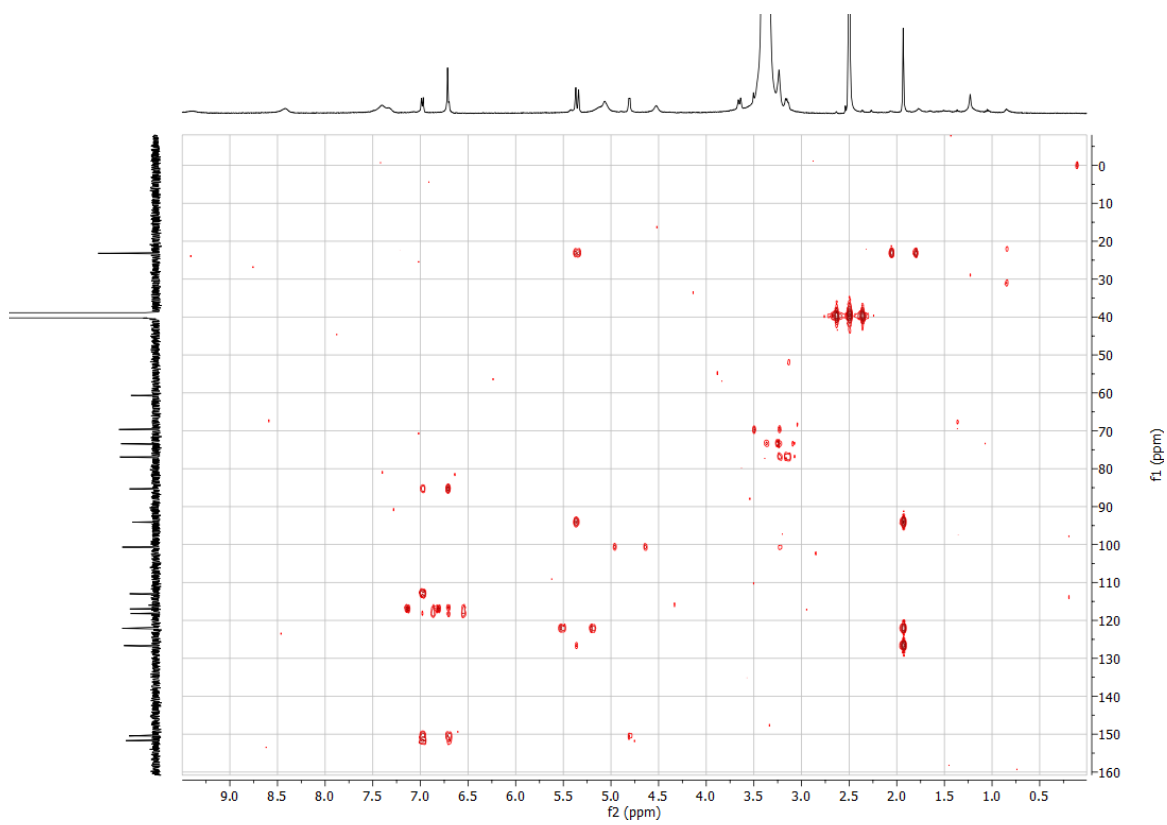


Figure S5. HMBC spectrum of **1** in DMSO- d_6 .

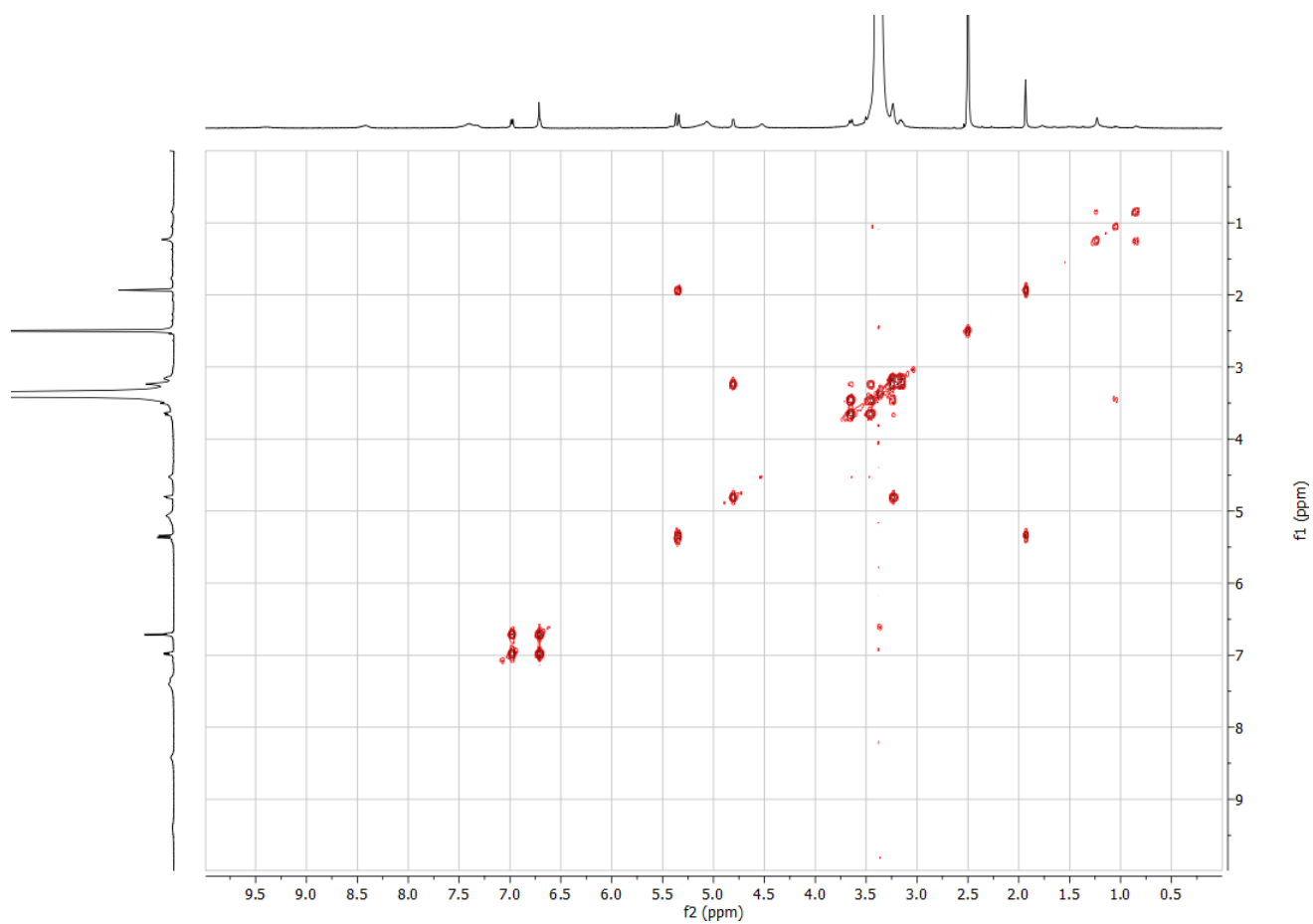


Figure S6. ^1H - ^1H COSY spectrum of **1** in $\text{DMSO-}d_6$.

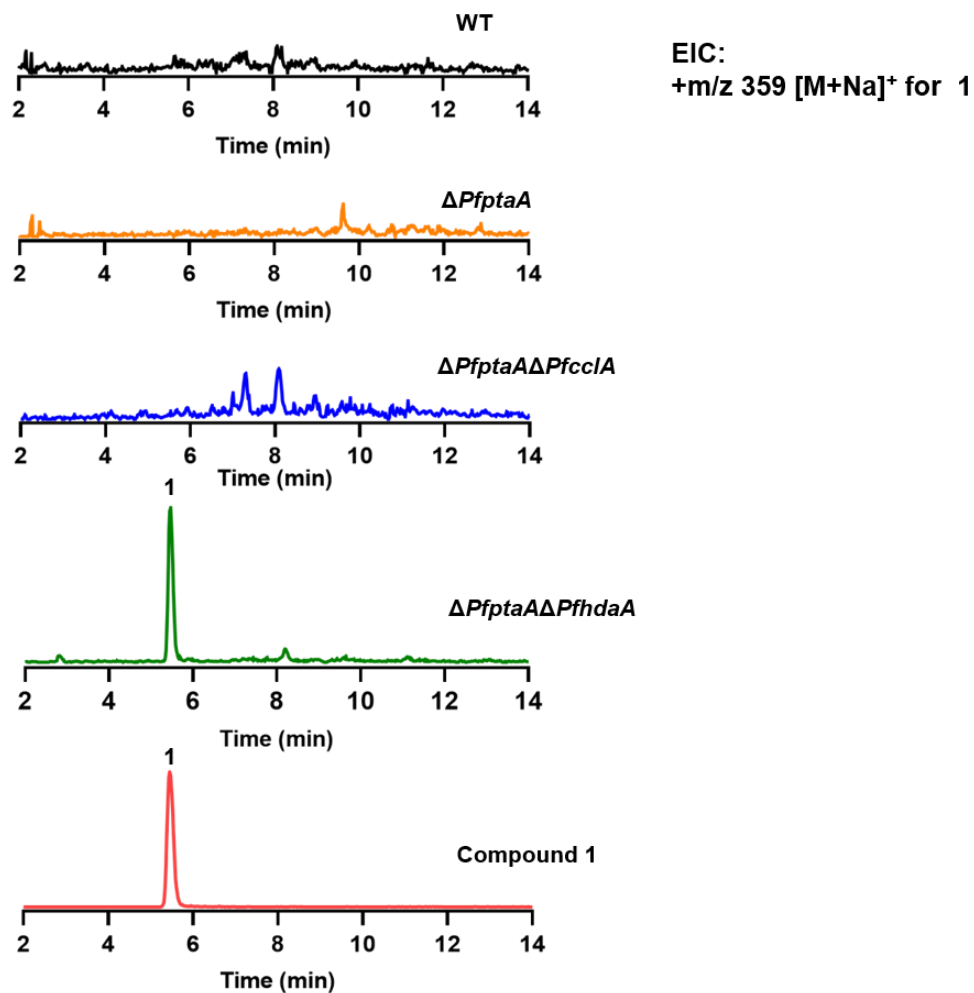


Figure S7. LC-MS analysis of compound **1** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfccIA$, and $\Delta PfptaA\Delta PfhdA$ strains.

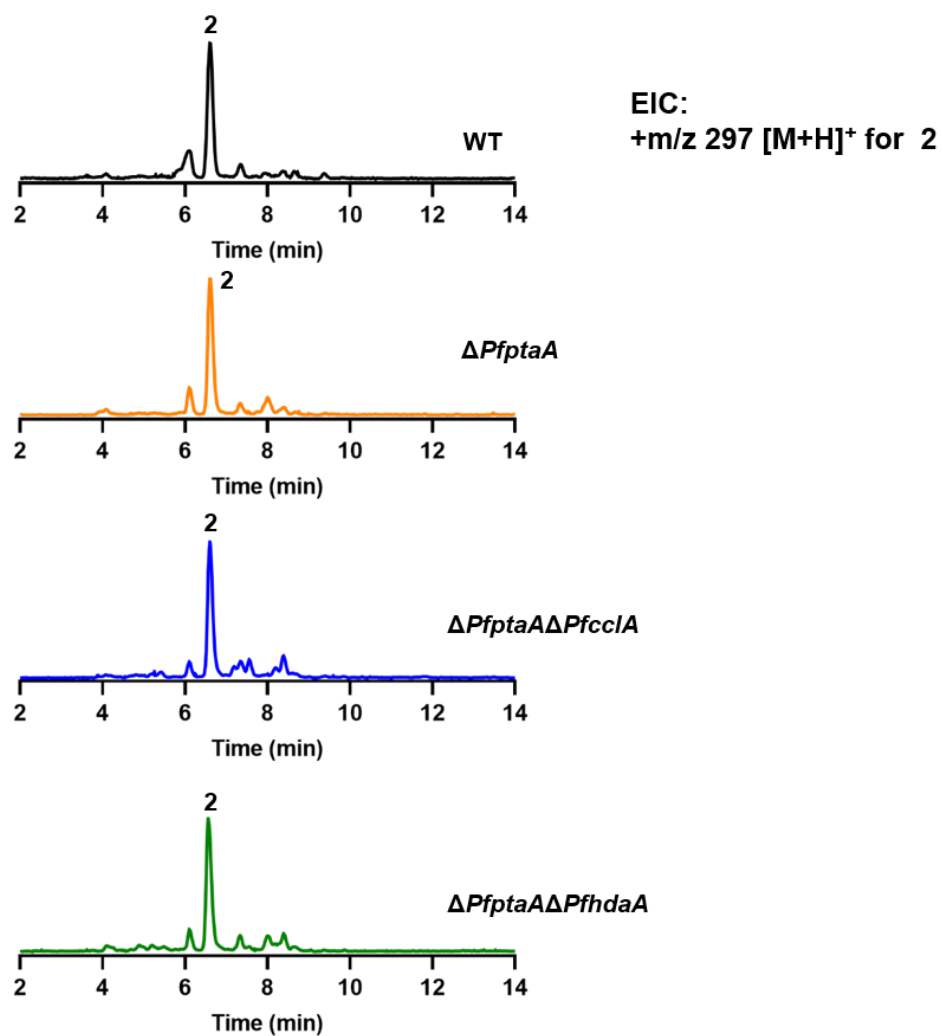


Figure S8. LC-MS analysis of compound **2** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfclA$, and $\Delta PfptaA\Delta PfhdA$ strains.

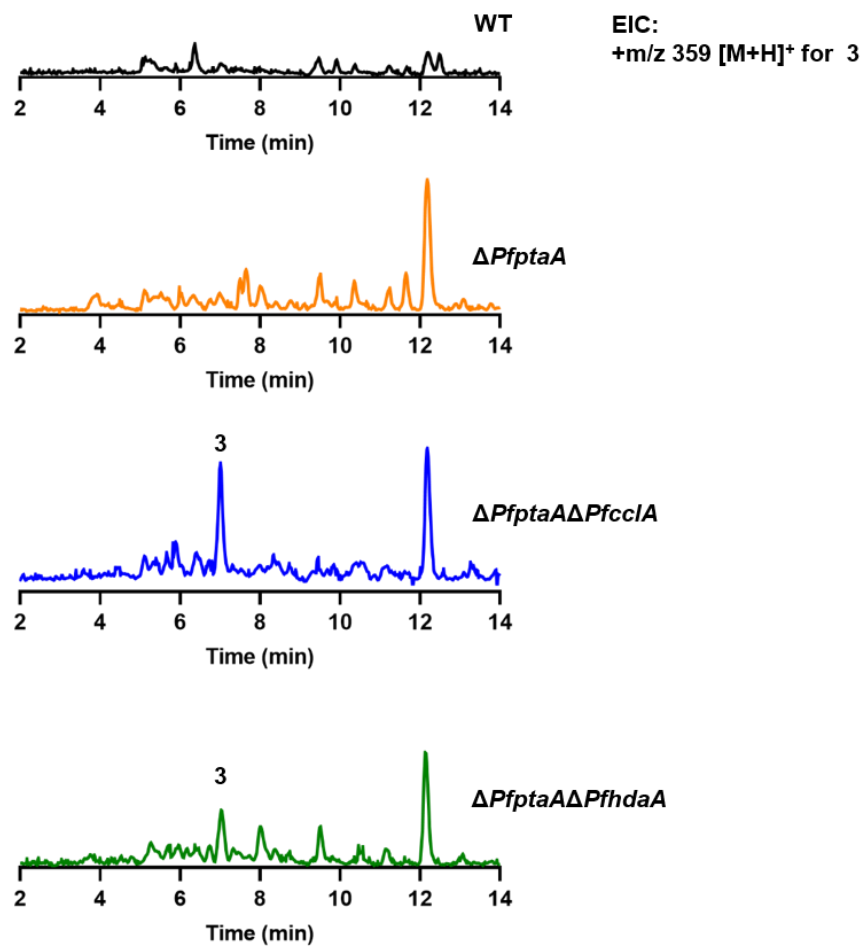


Figure S9. LC-MS analysis of compound **3** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfclA$, and $\Delta PfptaA\Delta PfhdA$ strains.

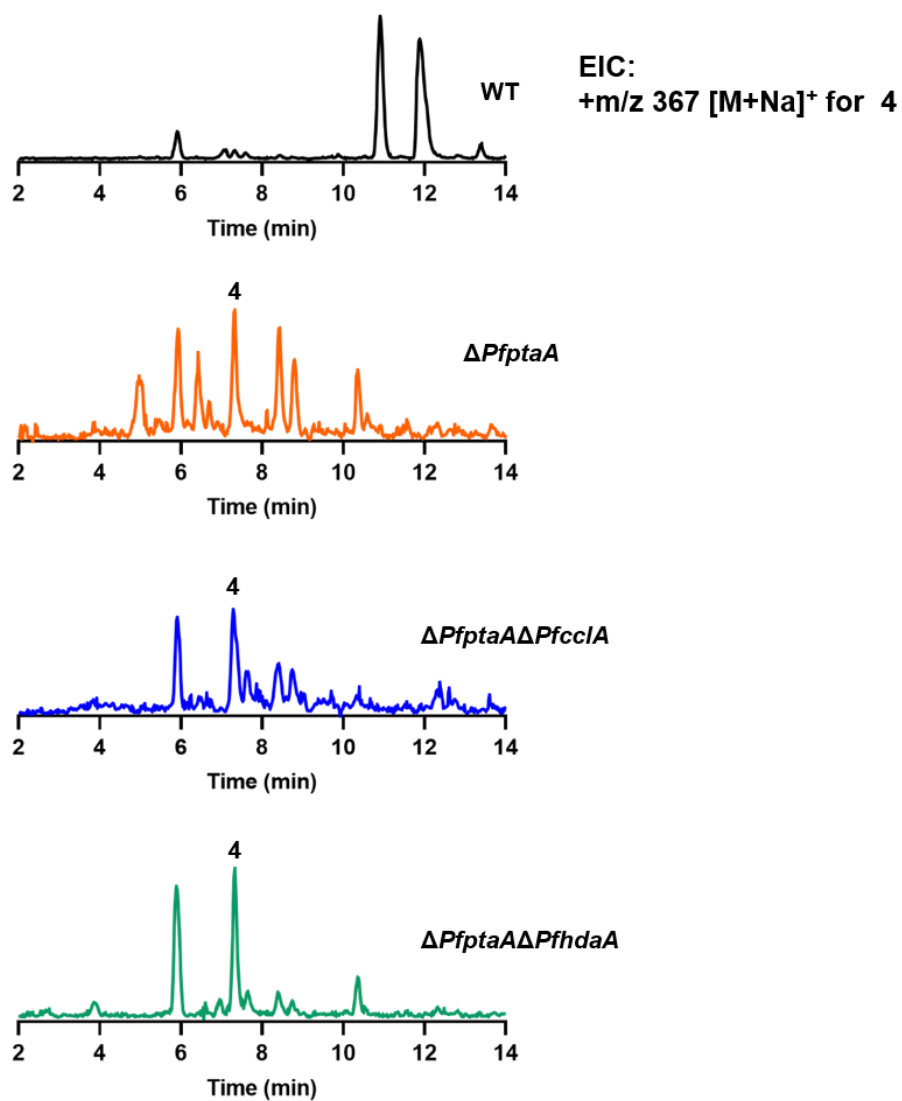


Figure S10. LC-MS analysis of compound **4** in the WT, $\Delta PfpA$, $\Delta PfpA\Delta PfcIA$, and $\Delta PfpA\Delta PfhdaA$ strains.

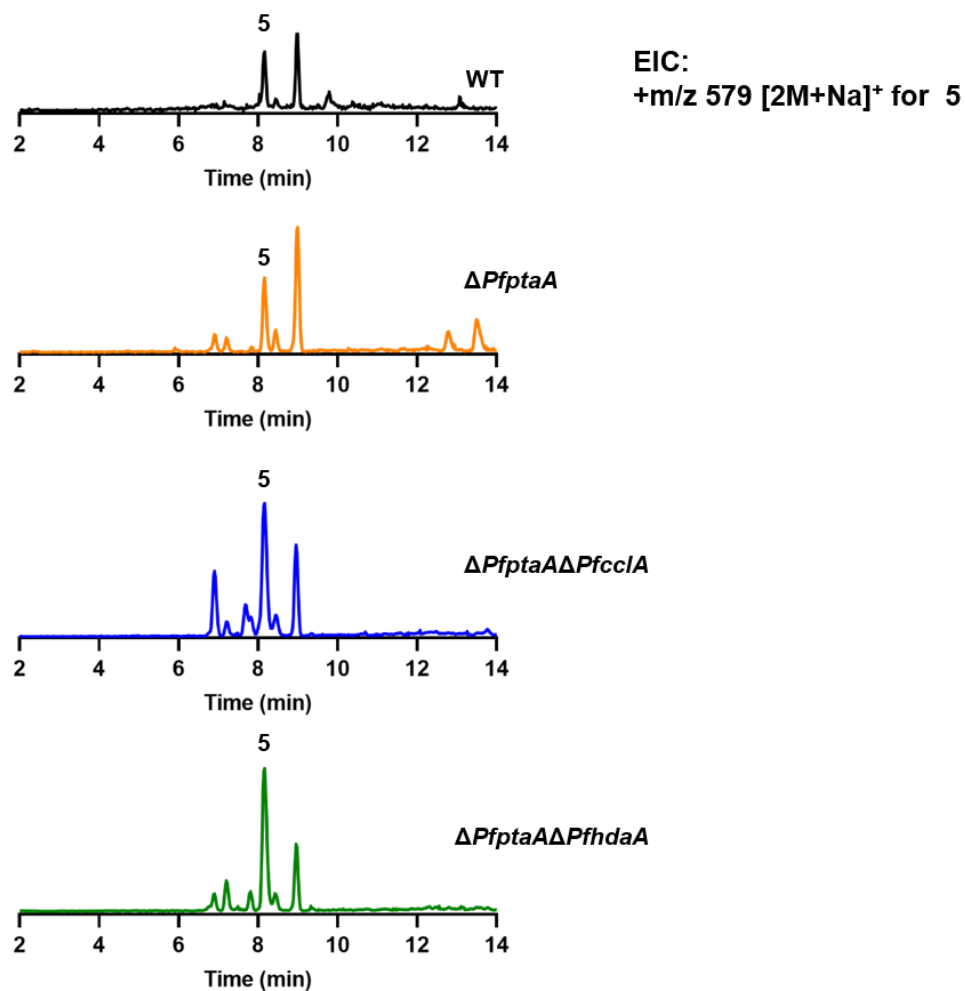


Figure S11. LC-MS analysis of compound **5** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfclA$, and $\Delta PfptaA\Delta PfhdA$ strains.

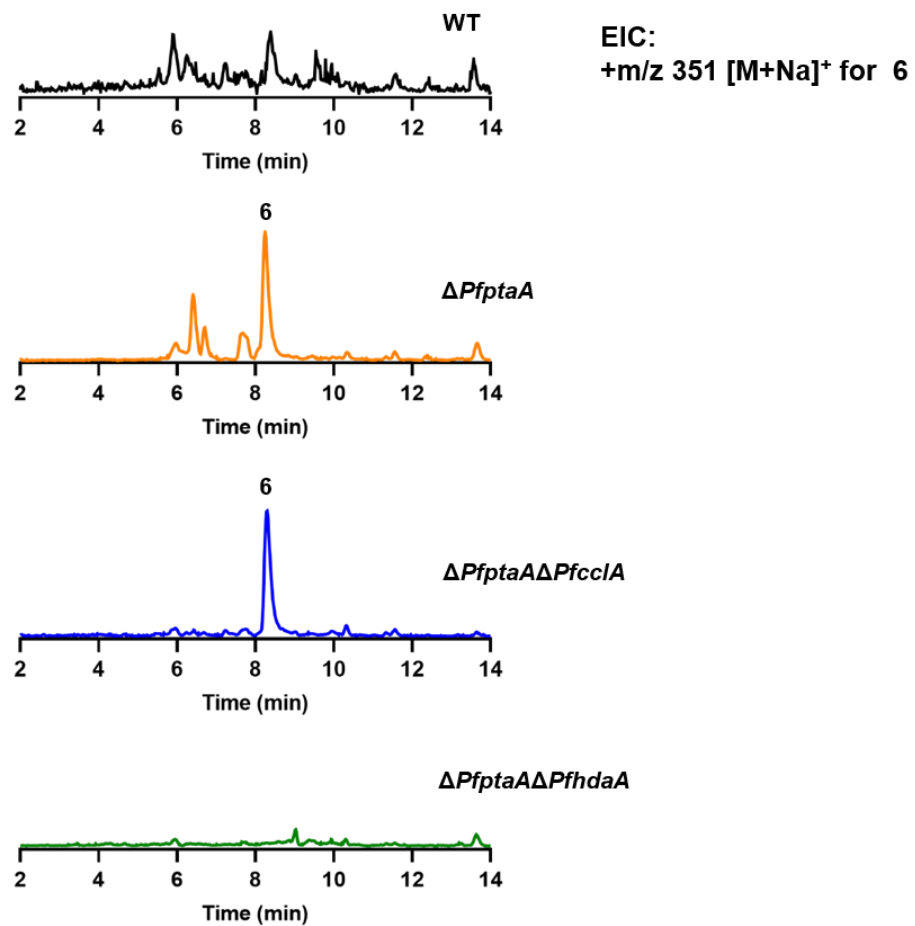


Figure S12. LC-MS analysis of compound **6** in the WT, $\Delta PfpA$, $\Delta PfpA\Delta PfcIA$, and $\Delta PfpA\Delta PfhdaA$ strains.

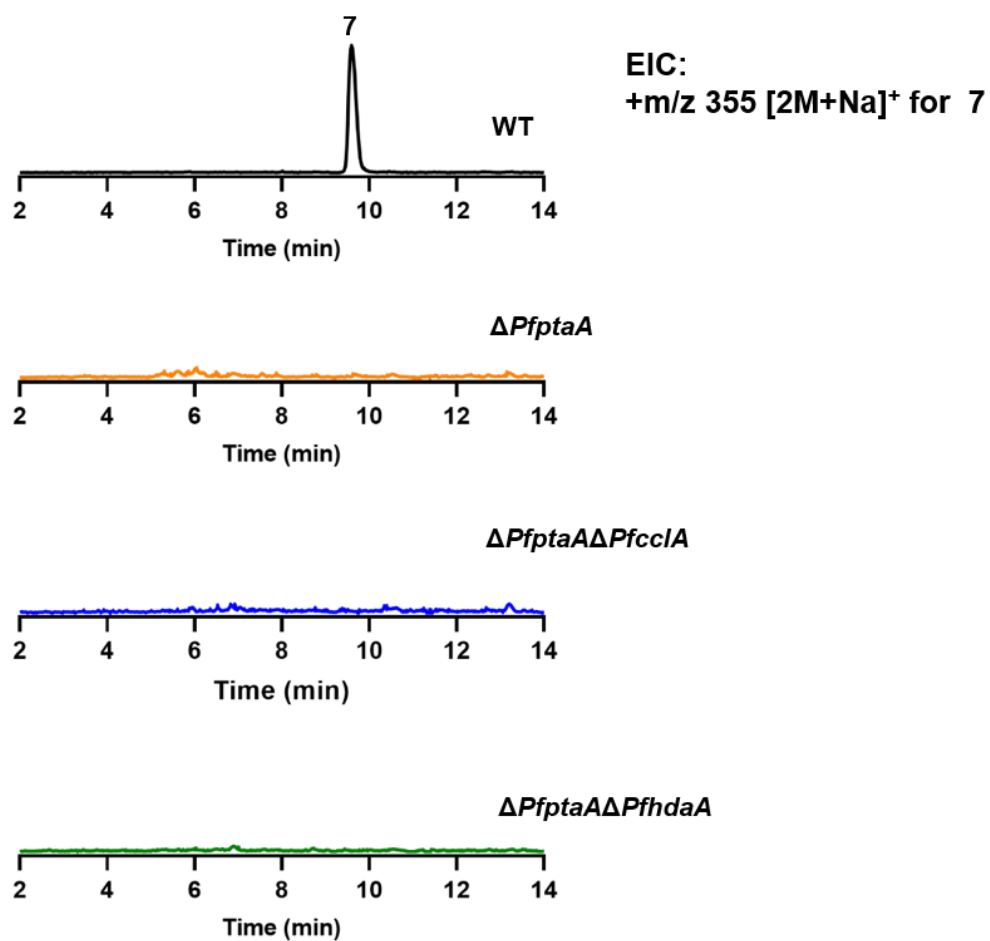


Figure S13. LC-MS analysis of compound **7** in the WT, $\Delta PfpA$, $\Delta PfpA\Delta PfcIA$, and $\Delta PfpA\Delta PfhdaA$ strains.

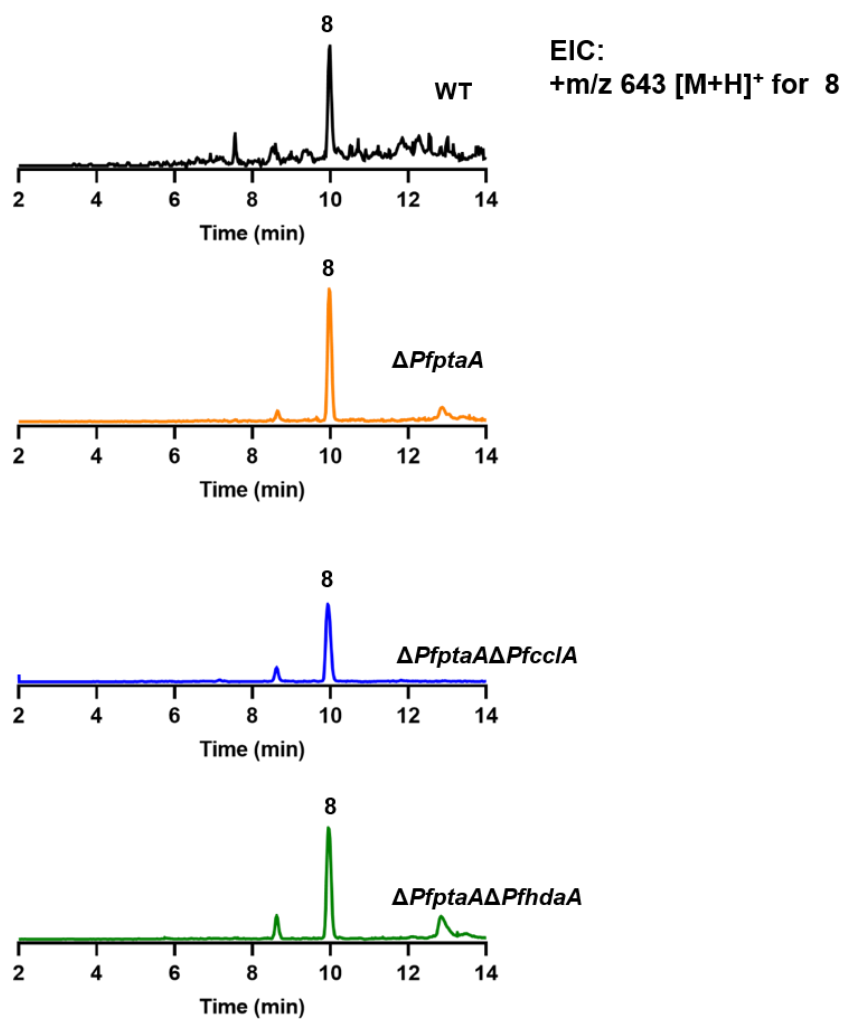


Figure S14. LC-MS analysis of compound **8** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfccIA$, and $\Delta PfptaA\Delta PfhdaA$ strains.

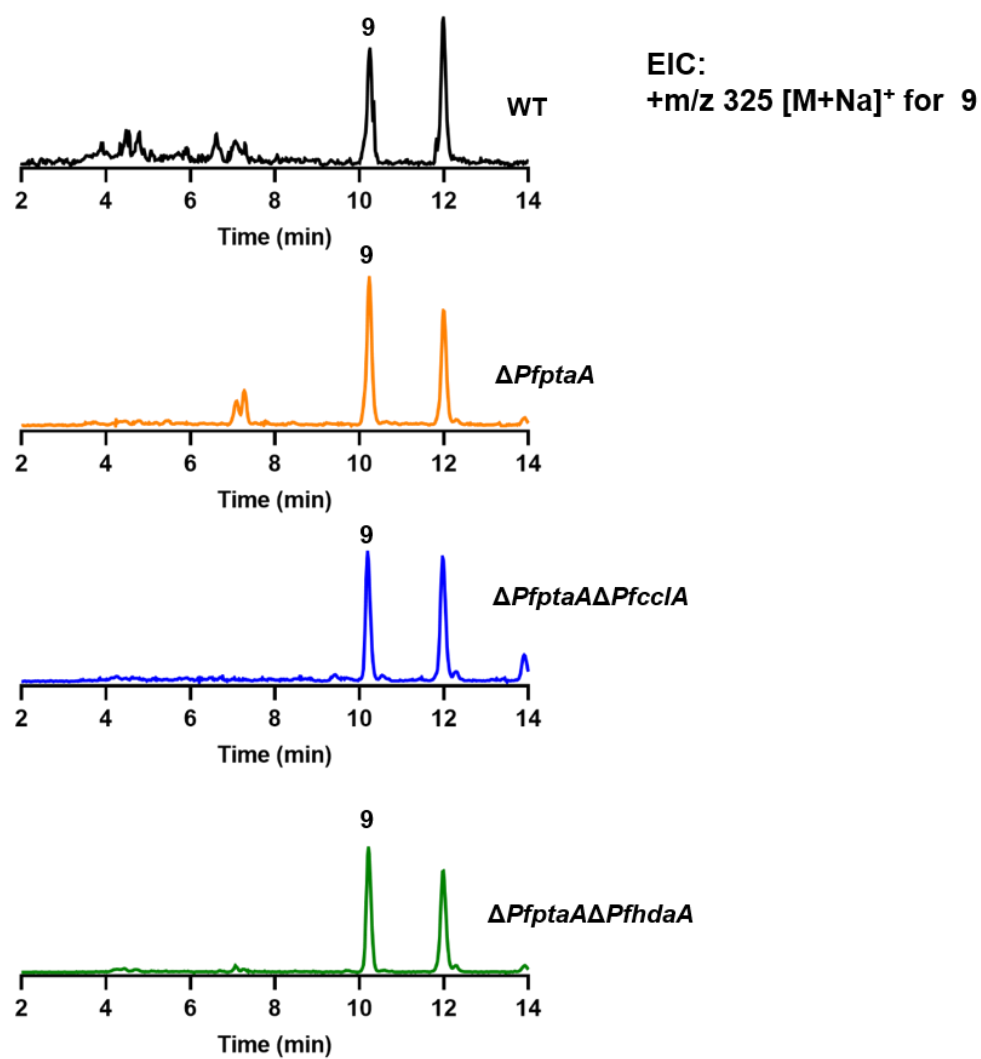
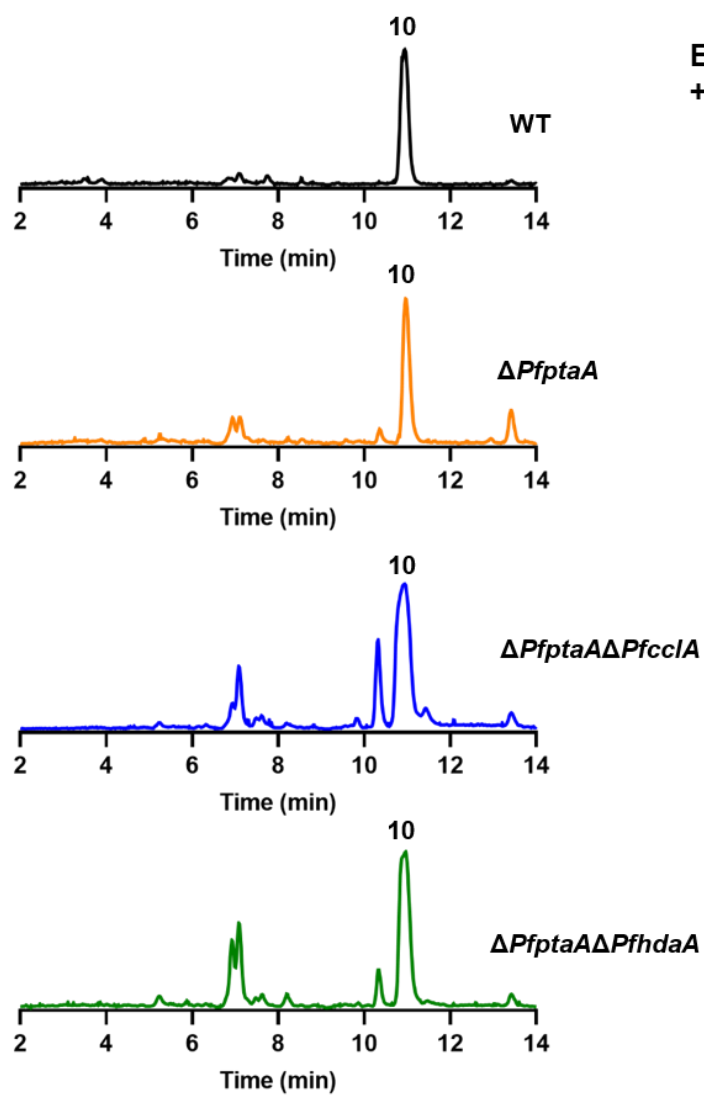


Figure S15. LC-MS analysis of compound **9** in the WT, $\Delta PfpA$, $\Delta PfpA\Delta PfcIA$, and $\Delta PfpA\Delta PfhdaA$ strains.



EIC:
+m/z 245 [M+H]⁺ for 10

Figure S16. LC-MS analysis of compound **10** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfclA$, and $\Delta PfptaA\Delta PfhdA$ strains.

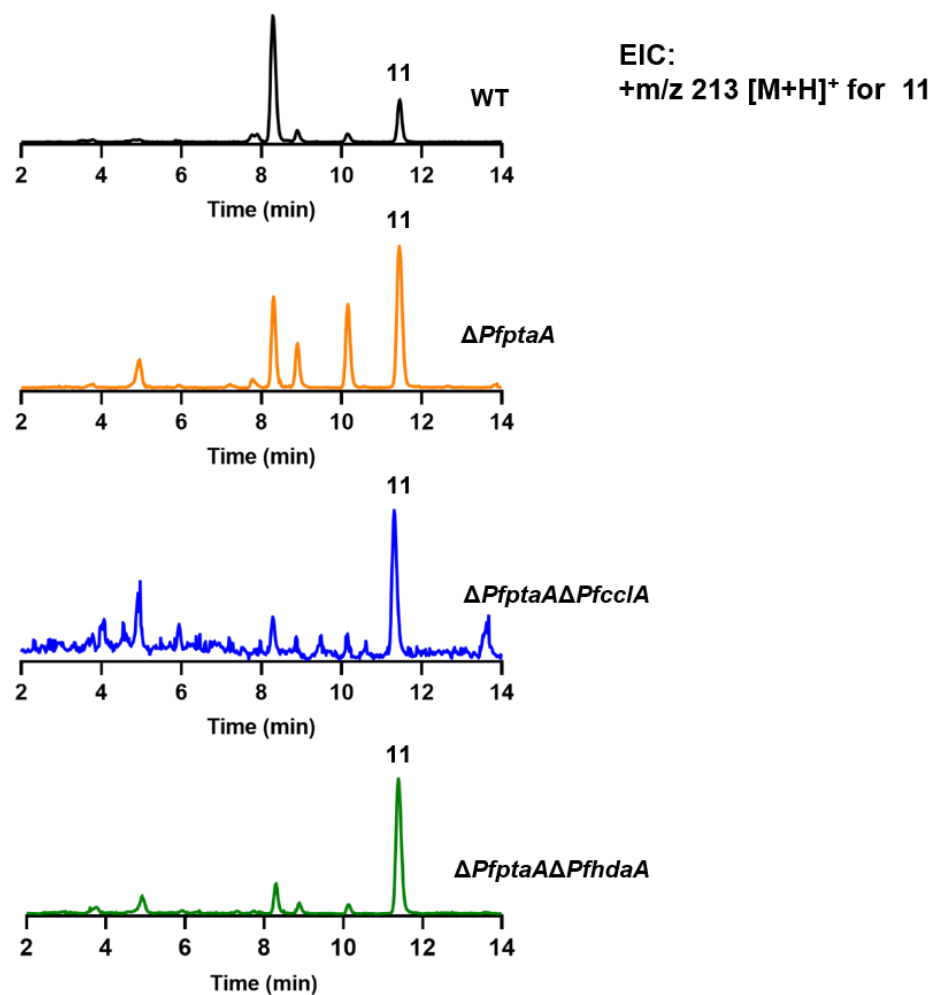


Figure S17. LC-MS analysis of compound **11** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfcclA$, and $\Delta PfptaA\Delta PfhdaA$ strains.

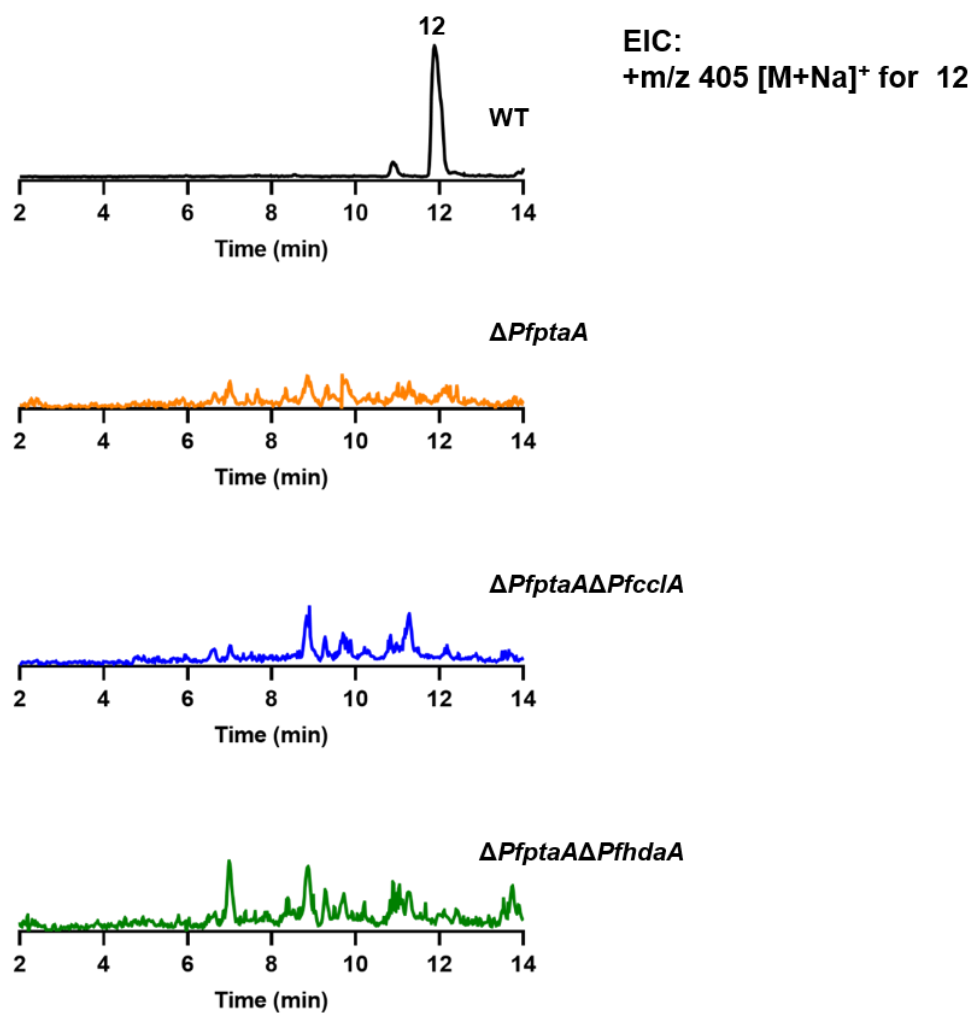


Figure S18. LC-MS analysis of compound **12** in the WT, $\Delta PfptaA$, $\Delta PfptaA\Delta PfclA$, and $\Delta PfptaA\Delta PfhdA$ strains.

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