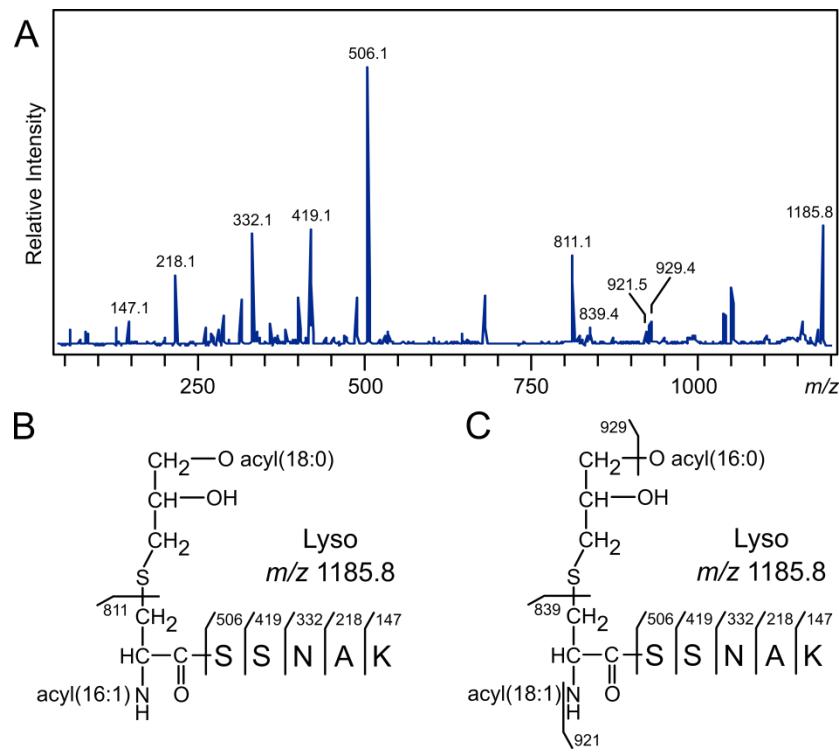


## Supplementary Information

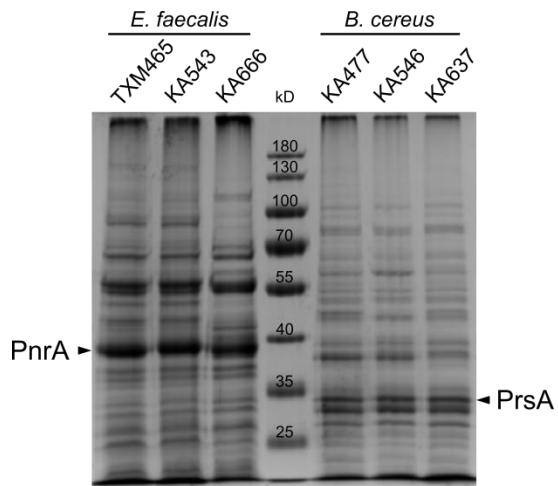
**Table S1** Primers used in this study

Description	Sequence (5' to 3')
5'-kanR	CAGACCGCTTCTGCCAGTGGGCTTACATG
kanR-3'	GACGGCCAGTGAATTGAAATCTCGTGTAGG
5'-rrnB terminator	CGCAGAAGCGGTCTGATAAAACAG
rrnB terminator-3'	GGAGAGCGTTACCGACAAACAAAC
5'-araC P <sub>BAD</sub>	TGATTACGCCAACGCTTGTAGCCCCAAAAACGG
araC P <sub>BAD</sub> -3'	CGGTGAACGCTCTCCAATTGTCGTGATTG
5'-ybeX P <sub>BAD</sub> -Int integration	GTCAAAATCCCGGATGACTCACCCCAGCCGAAGCTGGATGAATAAGAAATCTGTGATGGCAGGTTGGC
ybeX P <sub>BAD</sub> -Int integration-3'	TTCAATTATGAGGCAGAACGCATGTAGTTATCTATCCAGTTGGGTTAGGCCAAAAACGGGTATGGAG
5'-lpp::catR	CTGGGCGCGGTAATCCTGGGTTACTCTGCTGGCAGGGTGTATGAATATCCTCCTTAG
lpp::catR-3'	GGCGCACAAATGTGCGCCTTTTCACTCACAGGTACTATTAGTAGGCTGGAGCTGCTTC
5'-gutA::P <sub>BAD</sub> .Int	CATGGTGCAGAGTGGTTATCGGGCTGTTCCAAAAGGGCGGAGAGGTGTTAGACCATGATTACGCCAAGC
gutA::P <sub>BAD</sub> -Int-3'	CGATCCCGCGCGATATCGTGGGGACAGGGCCTGCCACATGGACAGTGCCGTAACACGACGGCCAGTG
5'-chiQ::aprR	CTCATGCCATAATGGCATCGGGCTGGTAGCTTGTGCGCAATCACCTAGATCCTTTGG
chiQ::aprR-3'	CTGCGTATTCCTGCCAGACTTATCACAATCGGCTTCACCCGTTCCGCTCATGAGC
5'-Int::specR	GCCTCATTAATTGAACGCCAGCGCATTGCCCTGCTGTCGGCGATCCCCGCTCGCGCAG
Int::specR-3'	CACAGCAGCAAACCAACAAATGCCGTAGCACCCACAGCGGGCTGAACGAATTGTTAG
5'-Int pUC19	GATTACCCAAGCTTAGCCGAAGCTGGATG
Int pUC19-3'	GACGGCCAGTGAATTATGTATTCCGGCACG
5'-lppK58A	GCTTTGTGAATTATTTGTATATCG
lppK58A-3'	CACTTCACAGGTACTATTACGCCGGTATTAGTAG
5'-kanR	CCTCGACTCGCTGCAAGATCCCTCACGCTG
kanR-3'	AGTACCTGTGAAGTGAAGCTTTGGTCGGTCATTG
5'-repA	GCAGCGAAGTCGAGGCATTCTGTC
repA-3'	TTAATTACAAAAGCGAATCCGACAGTAAG
5'-specR	CAGGGGATCAAGATCTATCCCTGCTCGCGCAG
specR-3'	CTGTGAAGTGAAGCTTGCTGAAACGAATTGTTAG
5'-lppK58A-Strep	CATCCTCAATTGAAAAATAATAGTACCTGTGAAGTG
lppK58A-Strep-3'	ACTCCACGCTGAACCGGATCCCGCGCGTATTAGTAG
5'-pKFC WMC_RS08810 upstream	GACGGCCAGTGAATTCAAGCCAGTGATTG
pKFC WMC_RS08810 upstream-3'	GAGTCCAAGTGTTCCTAAACGCAATTG
5'-WMC_RS08810 downstream	GAAACACTGGACTCTTATTAGAAGGCCTG
WMC_RS08810 downstream-3'	TGATTACGCCAGCTCATCTAGCCTTCGG
5'-pKFC BC1526 upstream	GACGGCCAGTGAATTCCGTGGCAACTGG
pKFC BC1526 upstream-3'	CCATTGTTGCGAGTGCAAAATAGAAAATGC

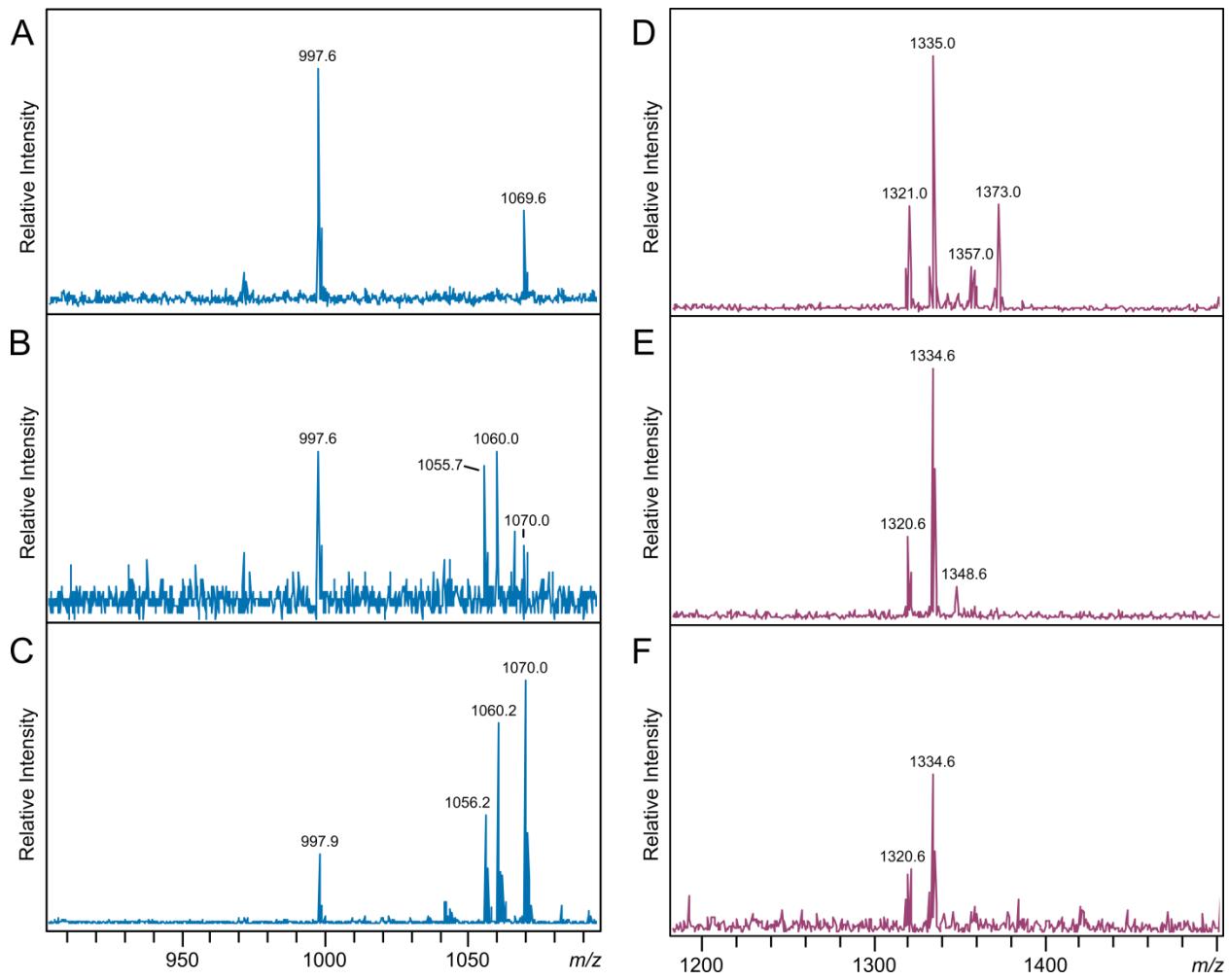
5'-pKFC BC1526 downstream	GCACTCGCAACAATGGTCTCTGCTAAAGAG
pKFC BC1526 downstream-3'	TGATTACGCCAAGCTAGGCACTACGTACTC
5'-WMC_RS08810 pMSP3535	CCACTAGTCCC GGCTGCAGCCTATGTTGTTGATTCC
WMC_RS08810 pMSP3535-3'	GAGACCGGCCTCGAGGCGAGCAATTTGGAATTG
5'-BC1526 pSP-hp	CAAGGAGGTGAATGTACATTGGATCGATTGATTAC
BC1526 pSP-hp-3'	CGGCCGGTACCGGATCCTAGAACAGAACTAGACCG



**FIG S1** MALDI-TOF MS/MS Spectrum of the *E.coli* Lpp ion *m/z* 1185. MS/MS spectrum of the *m/z* 1185 ion of Lpp purified from KA532 (A) and the two elucidated structures (B and C) of lyso-form Lpp featuring lipidated cysteine with two fatty acids totaling 34:1.



**FIG S2** Lipoproteins from *E. faecalis* and *B. cereus*. Using the Triton X-114 phase partitioning method, lipoproteins were enriched from *E. faecalis* strains TXM465 (WT), KA543 ( $\Delta$ WMC\_RS08810), and KA666 ( $\Delta$ WMC\_RS08810 + pMSP3535-WMC\_RS08810), along with *B. cereus* strains KA477 (WT), KA546 ( $\Delta$ BC1526), and KA637 ( $\Delta$ BC1526 + pSP-BC1526-hp). The resulting Triton X-114 phases were analyzed by SDS-PAGE and visualized by Coomassie blue staining.



**FIG S3** MALDI-TOF MS of *E. faecalis* PnrA and *B. cereus* PrsA. Parent MS spectra of the  $m/z$  997 ion region corresponding to the *N*-terminal lipopeptide of *E. faecalis* PnrA purified from the wildtype strain (A), the deletion strain (B), and the back-complemented strain (C). MS spectra of the  $m/z$  1334 parent ion region corresponding to the *N*-terminal lipopeptide of *B. cereus* PrsA purified from the wildtype strain (D), the deletion strain (E), and the back-complemented strain (F).