Table S5. Bacterial strains, phages, plasmids and primers.

Strains, phages, plasmids and primers	Characteristics and/or description	Reference/source
Enterococcus faecalis		
V583	Human blood isolate; Vm^R, Em^R, Gm^R	(1)
ATCC29212	Human urine isolate; Quality control strain; Tc^R	(2)
T1	SS498; CDC reference strain,	(3)
T2	Human urine isolate; Sapporo-603; Tc^R	(3)
T3	Human urine isolate; Sapporo-109; Tc^R	(3)
T8	Human urine isolate; Nagasaki-742; Tc^R, Em^R	(3)
T11	Human urine isolate; Sapporo-027;	(3)
X98	Infant fecal isolate; Lancefield H69D6	(3)
Fly1	Commensal isolate from Drosophila	(3)
AR01/DG	Dog wound isolate; Vm^R, Tc^R, Em^R	(3)
DS5	FDA strain PCI1326, Tc^R, Em^R	(3)
JH1	Clinical isolate; Tc^R, Em^R, Gm^R	(3)
D6	Pig isolate; Tc^R, Em^R, Gm^R	(3)
ATCC4200	Human blood isolate; Patient with rheumatic fever	(3)
CH188	Human liver isolate; Tc^R, Em^R, Gm^R, Cm^R, Ap^R	(3)
E1Sol	Human fecal isolate; Solomon Islands	(3)
HIP11704	Clinical isolate; Vm^R, Em^R, Gm^R	(3)
OG1RF	Human oral isolate; Rf^R, Fa^R	(4)
Merz96	Human blood isolate; Vm^R, Tc^R, Em^R, Gm^R	(3)
BDU50	ΔEF0858 PIP_{EF} mutant of V583	This study
BDU51	PIP_{Ef} replacement strain; EFJG_01790 with EF0858 in E1Sol	This study
BDU53	EF0858 PIP_{EF} variable region mutant in V583; Δaa 342-390	This study
BDU54	EF0858 PIP_{EF} variable region mutant in V583; Δaa 391-439	This study
BDU55	EF0858 PIP_{EF} variable region mutant in V583; Δaa 440-494	This study
APENS1	Phage resistant mutant of V583; PIP_{EF} 5' ISE	This study
APENS2	Phage resistant mutant of V583; PIP_{EF} ATACGATTGA insertion	This study
APENS3	Phage resistant mutant of V583; PIP_{EF} nucleotide deletion frameshift	This study
VPENS1	Phage resistant mutant of V583; PIP_{EF} ATACGATTGA insertion	This study
VPENS2	Phage resistant mutant of V583; PIP_{EF} nucleotide deletion frameshift	This study
VPENS3	Phage resistant mutant of V583; PIP_{EF} nucleotide change; Glu to Stop	This study
VFWNS1	Phage resistant mutant of V583; PIP_{EF} ATACGATTGA insertion	This study
VFWNS2	Phage resistant mutant of V583; PIP_{EF} nucleotide change; Gly to Stop	This study
VFWNS3	Phage resistant mutant of V583; PIP_{EF} nucleotide change; Gly to stop	This study
Enterococcus faecium		
Com12	Human fecal isolate	(3)
Com15	Human fecal isolate	(3)
1,141,733	Human blood isolate	(3)
Escherichia coli		
TG1	[F' *traD36 proAB lacIqZ ΔM15*] *supE thi-1* Δ(*lac-proAB*) Δ(*mcrB-hsdSM*)5(*rK - mK* -)	Lucigen
Phages		
ϕVPE25	*Siphoviridae*; Wastewater isolate	This study
ϕVFW	*Siphoviridae*; Wastewater isolate	This study
Plasmids		
pLT06	*E. faecalis* allelic exchange vector; Cm^R	(5)
pLZ12	Shuttle vector; pSH71 origin; Cm^R	(6)
pAT28-cat	Shuttle vector; pUC and pAMβ1 origins; Cm^R	Rodrigues and Palmer, 2016
pLTPIP	pLT06 with ΔEF0858 extending from +25 to +2649 bp with respect to the predicted start site; Cloned as a PstI-NcoI fragment; Allelic exchange vector for deletion of PIP_{EF} in *E. faecalis* V583	This study
pLTDPIPA	pLT06 with ΔEF0858 extending from +1024 to +1170 bp with respect to the predicted start site; Cloned as a XbaI-NcoI fragment; Allelic	This study

	exchange vector for ΔA truncation of PIP_{EF} in *E. faecalis* V583	
pLTDPIPB	pLT06 with ΔEF0858 extending from +1171 to +1317 bp with respect to the predicted start site; Clone as a XbaI-NcoI fragment; Allelic exchange vector for ΔB truncation of PIP_{EF} in *E. faecalis* V583	This study
pLTDPIPC	pLT06 with ΔEF0858 extending from +1318 to +1482 bp with respect to the predicted start site; Cloned as a XbaI-NcoI fragment; Allelic exchange vector for ΔC truncation of PIP_{EF} in *E. faecalis* V583	This study
pLTPdV1	pLT06 with EF0858 from +76 bp to +2751 with respect to the predicted start site; Cloned as a XbaI-NcoI fragment; Allelic replacement vector used to generate transgenic PIP_{EF} in *E. faecalis* E1Sol	This study
pLZPIP	pLZ12 carrying V583 PIP_{EF} from -180 to +2780 with respect to the predicted start site; Complementation plasmid; Cloned as a PstI-BglII fragment	This study
pLZEV	pLZ12 carrying chimeric PIP_{EF}; E1sol PIP_{Ef} from -180 to +1261 fused to V583 PIP_{Ef} from +1262 to +2769 bp with respect to the predicted start site; PIP swapping plasmid for *E. faecalis*; Cloned as a PstI-BglII fragment	This study
pPBPIP	pAT28-cat carrying V583 PIP_{EF} from -180 to +2780 with respect to the predicted start site; PIP swapping plasmid for *E. faecium*; Cloned as a KpnI fragment	This study
Primers		
EF0858L-F	NNNNNNCTGCAGGATCAACAGAAACTGGTAGAGGACTATC; Forward primer for the left homology fragment and for final overlap extension PCR to generate pLTPIP; PstI site	This study
EF0858L-R	CAGCTTTTTGTTTTTTAATGGAATAAATGGCTCCATGTATTTTTTATATGTTTCATAAAATCACCTGC; Reverse primer for the left homology fragment used to generate pLTPIP	This study
EF0858R-F	GCAGGTGATTTTATGAAACATATAAAAAATACATGGAGCCATTTATTCCATTAAAAAACAAAAAGCTG; Forward primer for the right homology fragment used to generate pLTPIP	This study
EF0858R-R	NNNNNNCCATGGACGCAAACGTTTGGCTGG; Reverse primer or the right homology fragment and for final overlap extension PCR to generate pLTPIP; NcoI site	This study
PIP_F3TruncA	NNNNNNTCTAGATTGATTGTTGCCTTAATGATTATTCCATCATTATATGCA; Forward primer for the left homology fragment and for final overlap extension PCR to generate pLTDPIPA; XbaI site	This study
PIP_R1TruncA	TCCTAGGCTTTCAGACAGTTGTTGCTTGCCATCTAATGTGACATTCCCTAAATCATTGGC; Reverse primer for the left homology fragment used to generate pLTDPIPA	This study
PIP_F2TruncA	GCCAATGATTTAGGGAATGTCACATTAGATGGCAAGCAACAACTGTCTGAAAGCCTAGGA; Forward primer for the right homology fragment used to generate pLTDPIPA	
PIP_R3TRuncA	NNNNNNCCATGGCCGTGCTGAAAATTGTTCCCGTTTAGAGAA; Reverse primer or the right homology fragment and for final overlap extension PCR to generate pLTDPIPA; NcoI site	This study
PIP_F1TruncB	NNNNNNTCTAGAGCCGGGATTTATTTACCTAAAGATTTTTCCAAAGAT; Forward primer for the left homology fragment and for final overlap extension PCR to generate pLTDPIPB; XbaI site	This study
PIP_R1TruncB	CGCATTCACATCAATGTTATCAACATCAGTTTTTAATCTAATTGCTTCTCTTTCTTCAACTGGTAAACGATG; Reverse primer for the left homology fragment used to generate pLTDPIPB	This study
PIP_F2TruncB	CATCGTTTACCAGTTGAAGAAAGAGAAGCAATTAGATTAAAAACTGATGTTGATAACATTGATGTGAATGCG; Forward primer for the right homology fragment used to generate pLTDPIPB	This study
PIP_R2TruncB	NNNNNNCCATGGCGCTTCAACATCTGGCATTTTCTCATTGAC; Reverse primer or the right homology fragment and for final overlap extension PCR to generate pLTDPIPB; NcoI site	This study
PIP_F1TruncC	NNNNNNTCTAGATTCAATGATATTGGCTATGATATTGATAAAAACATGGTTAGC; Forward primer for the left homology fragment and for final overlap extension PCR to generate pLTDPIPC; XbaI site	This study
PIP_R1TruncC	TTTGTTTAGTTGACCTTGAGCGTTTTGGATAACTACAATACCATCAATCGTATTCAATCTATTTATTGTGTC; Reverse primer for the left homology fragment used to generate pLTDPIPC	This study

PIP_F2TruncC	GACACAATAAATAGATTGAATACGATTGATGGTATTGTAGTTATCCAAAACGCTCAAGGTCAACTAAACAAA; Forward primer for the right homology fragment used to generate pLTDPIPC	This study
PIP_R2TruncC	NNNNNNCCATGGACACAAAGCTGTATAGAATGGCGTACTTGC; Reverse primer for the right homology fragment and for final overlap extension PCR to generate pLTDPIPC; NcoI site	This study
PIPswap-F1	NNNNNNTCTAGATTTTTGATTGTTGCCTTAATGATTATTCCATCA; Forward primer used to amplify the *E. faecalis* V583 PIP_{EF} region in pLTPdV1; XbaI site	This study
PIPswap-R1	NNNNNNCCATGGATAAAGAATTGCACCGCCAATACTAAAGAC; Reverse primer used to amplify the *E. faecalis* V583 PIP_{EF} region in pLTPdV1; NcoI site	This study
PIPcompLZ-F1	NNNNNNCTGCAGCCAGAAGCCATTGATGAAGTTAAAC; Forward primer used to clone the *E. faecalis* V583 PIP_{EF} open reading frame in pLZPIP; PstI site	This study
PIPcompLZ-R1	NNNNNNAGATCTATTGCCAAAAAGTCAAAAGCAAGAGC; Reverse primer used to clone the *E. faecalis* V583 PIP_{EF} open reading frame in pLZPIP; BglII site	This study
PIPF1-E	NNNNNNCTGCAGCCAGAAGCCATTGATGAAGTTAAACAAGTC; Forward primer for the left homology in pLZEV; PstI site	This study
PIPR1-E	AATCGTATTCAATCTATTTATTGTGTCTTGTAAATCAGTGTTACCTGTGGCTTCTTGTATTTGCGT; Reverse primer for the left homology fragment in pLZEV; BglII site	This study
PIPF2-V	ACGCAAATACAAGAAGCCACAGGTAACACTGATTTACAAGACACAATAAATAGATTGAATACGATT; Forward primer for the right homology fragment in pLZEV	This study
PIPR2-V	NNNNNNAGATCTATTGCCAAAAAGTCAAAAGCAAGAGC; Reverse primer for the right homology fragment in pLZEV; BglII site	This study
PIPcomp28-F1	NNNNNNGGTACCCCAGAAGCCATTGATGAAGTTAAAC; Forward primer used to clone the *E. faecalis* V583 PIP_{EF} open reading frame in pPBPIP; KpnI site	This study
PIPcomp28-R1	NNNNNNGGTACCATTGCCAAAAAGTCAAAAGCAAGAGC; Reverse primer used to clone the *E. faecalis* V583 PIP_{EF} open reading frame in pPBPIP; KpnI site	This study
PIPvaruniv-F	GTCACATTAGATGGCGCYAMTMAATTG; Forward primer to amplify the PIP_{EF} variable region from sewage samples	This study
PIPvaruniv-R	CTTGAGCGTTTTGGATGGTASRAYTTAYTTTG; Reverse primer to amplify the PIP_{EF} variable region from sewage samples	This study
PIPorf-F	GCCATTGATGAAGTTAAACAAGTCGTTTCGG; Forward primer used to amplify the PIP_{EF} from *E. faecalis* mouse intestinal isolates	This study
PIPorf-R	GCTGTTCGTTTTTCCAATTTACGACGTTC; Reverse primer used to amplify the PIP_{EF} from *E. faecalis* mouse intestinal isolates	This study
VFW_2_For	TATTTTGAGTTTTATTTTGTTGTTT; Forward methyl primer for ϕVFW bisulfite sequencing	This study
VFW_2_Rev	AATCCCAATCCTATTTACCATATTC; Reverse methyl primer for ϕVFW bisulfite sequencing	This study
VPE25_1_For	GTTGGATAGTAGTAAAAATTAAAATATTTG; Forward methyl primer for ϕVPE25 bisulfite sequencing	This study
VPE25_1_Rev	ACTAACATTAATCCAAAACCAATAAAAC; Reverse methyl primer for ϕVPE25 bisulfite sequencing	This study
OG1RF_11844_For	GATATTTGTAGGTATATTTTTGTTT; Forward methyl primer for *E. faecalis* OG1RF bisulfite sequencing	This study
OG1RF_11844_Rev	AAATATTACTTTCATTAATAAAACC; Reverse methyl primer for *E. faecalis* OG1RF bisulfite sequencing	This study
mtail-F1	GACGCATTCTATGCGGACGA; Forward qPCR primer for amplifying orf_117 transcripts from ϕVPE25	This study
mtail-R1	AATGCTACACGAGGGGCAAC; Reverse qPCR primer for amplifying orf_117 transcripts from ϕVPE25	This study
PGRP-F1	TAAAGCACAGTTGGCGCAAG; Forward qPCR primer for amplifying orf_106 transcripts from ϕVPE25	This study
PGRP-R1	GCGCGTCTGGGTTTTTGTAG; Reverse qPCR primer for amplifying orf_106 transcripts from ϕVPE25	This study

capsid-F1	TGCGTGACATCGCTTACTCT; Forward qPCR primer for amplifying orf_123 transcripts from ϕVPE25	This study
capsid-R1	AGTTACCGTCTTCACGAGCA; Reverse qPCR primer for amplifying orf_123 transcripts from ϕVPE25	This study
EFrecA-F1	GATGGTGAGATGGGAGCGAG; Forward qPCR primer for amplifying *recA* transcripts from *E. faecalis* V583	This study
EFrecA-R1	CACGTCCACCAGGAGTTGTT; Reverse qPCR primer for amplifying *recA* transcripts from *E. faecalis* V583	This study
733recA-F1	CACAGCCTGACACAGGAGAA; Forward qPCR primer for amplifying *recA* transcripts from *E. faecium* 1,141,733	This study
733recA-R1	ACGTGCTTGTAACCCGACAT; Reverse qPCR primer for amplifying *recA* transcripts from *E. faecium* 1,141,733	This study

Vm^R - vancomycin resistance; Tc^R - tetracycline resistance; Em^R - erythromycin resistance; Gm^R - Gentamicin resistance; Cm^R - chloramphenicol resistant; Rf^R - rifampicin resistance; Fa^R - fusidic acid resistance; Ap^R - ampicillin resistance; Restriction sites are underlined

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