

Table S3A: Primers used in this study

Primer	Description	Sequence (5' to 3')*
RW1	<i>nttD</i> 5' F	ATGGTGCCAACATCATGCGT
RW2	<i>nttD</i> 5' R	AAAAAACCCGGGTAATGCGAACGACAGCGCCA
RW3	<i>nttD</i> 3' F	AAAAAACCCGGGAATCAGGATGACGAGGTTGGCA
RW4	<i>nttD</i> 3' R	TAGCCAACGCTATGCCCTCAAA
RW5	<i>nttD</i> compl F	AAAAAAGGTACCAAATGAAAAGTACCCACCTT
RW6	<i>nttD</i> compl R	AAAAAATCTAGATGCCCTCAAACAAAGTGACA
RW7	<i>lapA</i> compl F	AAAAGGTACCTGTAGTATATTTGCTCATTGATG
RW8	<i>lapA</i> compl R	AAAAAAGCTTATTTATGAGAGGCTTTAAAACAG
RW9	<i>plaC</i> compl F	AAAAGAATTCTGCATTTATTGGATATCGGGATT
RW10	<i>plaC</i> compl R	AAAAGAATTCCCACTGTTAATGTGGTTCAGGTG
RW11	<i>plaC</i> scr R	ACCGCTTCTGCGTTCTGATT
RW12	<i>lspF</i> qPCR F	TTCTATTTGCAGCGGGAGTC
RW13	<i>lspF</i> qPCR R	GCCTCACTGATTCCAATTCC
RW14	<i>lipA</i> qPCR F	CCTTGCACGGTTGGTTAGAT
RW15	<i>lipA</i> qPCR R	TCCTGGGGTAAGTGTGAAG
RW16	<i>lipB</i> qPCR F	TGCAAGGACAAACAGAGCAG
RW17	<i>lipB</i> qPCR R	AGCCAATACTAGCCGCTGAC
RW18	<i>plaA</i> qPCR F	GCGCATGTGATGGTTATTTG
RW19	<i>plaA</i> qPCR R	ACTCCACACCAGCTTCATCC
RW20	<i>srnA</i> qPCR F	CGCTCATCGTGGTGATACTG
RW21	<i>srnA</i> qPCR R	CACCAAGATCCCATTCTTGC
RW22	<i>celA</i> qPCR F	CAGCACGGCAGTAGAGTTCA
RW23	<i>celA</i> qPCR R	ATTACCGGCTTCAGGTTGTG
RW24	<i>lapB</i> qPCR F	CCCTCCGTCGTCACTGTAAT
RW25	<i>lapB</i> qPCR R	TAGAGTCATCATCGGCACCA
RW26	<i>lapA</i> qPCR F	GGTTACCGTGATTGGCAAAG
RW27	<i>lapA</i> qPCR R	ATGCTCGATGATCCACTTCC
RW28	<i>chiA</i> qPCR F	CTGCATTTTCCCAGCTATCC
RW29	<i>chiA</i> qPCR R	TTAGCCGTTCCCTCGATATG
RW30	<i>legP</i> qPCR F	ATGAGCAATCCCGATCAGAC
RW31	<i>legP</i> qPCR R	TCACCGAAATCTTTCCCATC
RW32	<i>plaC</i> qPCR F	TTGTCTCTCCCTTTGGTTGG
RW33	<i>plaC</i> qPCR R	AAAACGCAGGATCCTCTTCC
RW34	<i>plaC</i> qPCR F	AACAGTTTTGCCAGGAATGC
RW35	<i>plaC</i> qPCR R	CTTTTGCAATCCCTGATTCCG
RW36	<i>plcB</i> qPCR F	GGTCATCTTAGACGCCATGC

RW37	<i>plcB</i> qPCR R	AGTCGGGAAACACATCCATC
RW38	<i>lspD</i> qPCR F	GCCGCGAGCTATATCAAGTC
RW39	<i>lspD</i> qPCR R	TCATATCGTCACCTCGTGGA
RW40	<i>lspE</i> qPCR F	AGCTATCGCTCCTTTGGTCA
RW41	<i>lspE</i> qPCR R	CCACTCGTTCTCCATGGTTT
RW42	<i>map</i> qPCR F	ATGAGCGCCCAGTCATTGTT
RW43	<i>map</i> qPCR R	AGACGGTGCCTAAATACGG
RW44	<i>proA</i> qPCR F	ACTCCCGACACTCAATCGAC
RW45	<i>proA</i> qPCR R	AACCTGCATACAATGCGTCA
RW46	<i>csrA</i> qPCR F	AGGCAATCAAGTTCGCTTAGG
RW47	<i>csrA</i> qPCR R	CTGCTTGTTCCGAATCATCAGA
RW48	<i>lspG</i> qPCR F	GGATGAAGCCCGTAAAGTCA
RW49	<i>lspG</i> qPCR R	GGAACAGGATTGCTTGTGG
RW50	<i>lspC</i> qPCR F	ATCTGCCAGTGGGGAAGAA
RW51	<i>lspC</i> qPCR R	AAGGCTTAGCGACAGGTTCA
RW52	<i>lspL</i> qPCR F	ACTGGTTTGCCTAGCATCT
RW53	<i>lspL</i> qPCR R	AGGCGACAGGTATTTTGCTG
RW54	<i>gamA</i> qPCR F	CGTTATCCCGGCGATACTTA
RW55	<i>gamA</i> qPCR R	TTCGGGGACAGATTATGAGC
RW56	LPW16991 qPCR F	GATTCCGGCCTAAAGGAAAC
RW57	LPW16991 qPCR R	GCTGCACCCTTGCTTTTAAC
RW58	<i>gyrB</i> qPCR F	AATCCCCTGCAGCAAAATC
RW59	<i>qyrB</i> qPCR R	TGGTAAACCGGCAATATCCA
RW60	<i>flaA</i> qPCR F	GGTTGGGGCGAATCAAACC
RW61	<i>flaA</i> qPCR R	GTTGCTGCTCCTCCTCCAAT
RW62	<i>nttB</i> qPCR F	TGCGTGAACAGCTGTCAGAA
RW63	<i>nttB</i> qPCR R	TGGCGTTAACTGCATTCCCA
RW64	<i>nttC</i> qPCR F	GCCTACATAGCAGGCAGCAT
RW65	<i>nttC</i> qPCR R	GCAGGGCATTGACCATTAGT
RW66	<i>nttA</i> qPCR F	TCCAATGCTGAGGACACAGC
RW67	<i>nttA</i> qPCR R	GCATGCTGGCATAACAGTTCA
RW68	<i>nttD</i> qPCR F	AATGATCGCGGCGAAAACCTG
RW69	<i>nttD</i> qPCR R	CTTACCGGGTTCAAGCCACT
JG1	FL-LapA F	GACGACGACAAGATGACGACGTCGCCTGTTTCATG
JG2	FL-LapA R	GAGGAGAAGCCCGGTTATTACTCGGAAGCGAGTTCAATAGC
JG3	dN-LapA F	GACGACGACAAGATGGGTGTATCCAAATTACATAAAGACGTTTATG
JG4	dN-LapA R	GAGGAGAAGCCCGGTTATTACTCGGAAGCGAGTTCAATAGC
JG5	FL-LapB F	GACGACGACAAGATGCAGTCCCCTGAAGAAGATAGAATC

JG6	FL-LapB R	GAGGAGAAGCCCGGTTACTAATTTAAACCAAGCTCTACAATAAAGG
JG7	FL-NttD F	GACGACGACAAGATGTTTACATTACCAAGACAACCAACCAAATC
JG8	FL-NttD R	GAGGAGAAGCCCGGTTAATCCACTAACTGACTAAGCTTGAC

* Restriction sites are underlined

Table S3B: Plasmids used in this study

Plasmid	Description	Reference
pGEM-T Easy	mutagenizing vector backbone (Amp ^R)	Promega
pGnttDa	pGEM containing 5' <i>nttD</i> (Amp ^R)	this study
pGnttDb	pGEM containing 3' <i>nttD</i> (Amp ^R)	this study
pX1918-GT	Gentamicin cassette donor vector	Tyson JY et al. Infect Immun. 2013;81:1399-410
pGnttD::Gt	<i>nttD</i> mutagenizing plasmid (Gent ^R)	this study
pGplaC::Kn	<i>plac</i> mutagenizing plasmid (Kan ^R)	McCoy-Simandle K et al. Infect Immun. 2011;79:1984-97
pGplaC::Cm	<i>plac</i> mutagenizing plasmid (Chloro ^R)	Tyson JY et al. Infect Immun. 2013;81:1399-410
pMMB2002	complementation vector backbone (Chloro ^R)	Rossier et al. Infect Immun. 2004;72:310-21
pMnttD	<i>nttD</i> complementation plasmid (Chloro ^R)	this study
pMMB-Gent	complementation vector backbone (Gent ^R)	Hammer BK and Swanson MS. Mol Microbiol. 1999;33:721-31
pMlapA	<i>lapA</i> complementation plasmid (Gent ^R)	this study
pMplaC	<i>plac</i> complementation plasmid (Gent ^R)	this study