

Figure S1 A heatmap of pairwise comparison of *repB*_{IncFIB} sequences.
 Notes: The original data are shown in Table S3.

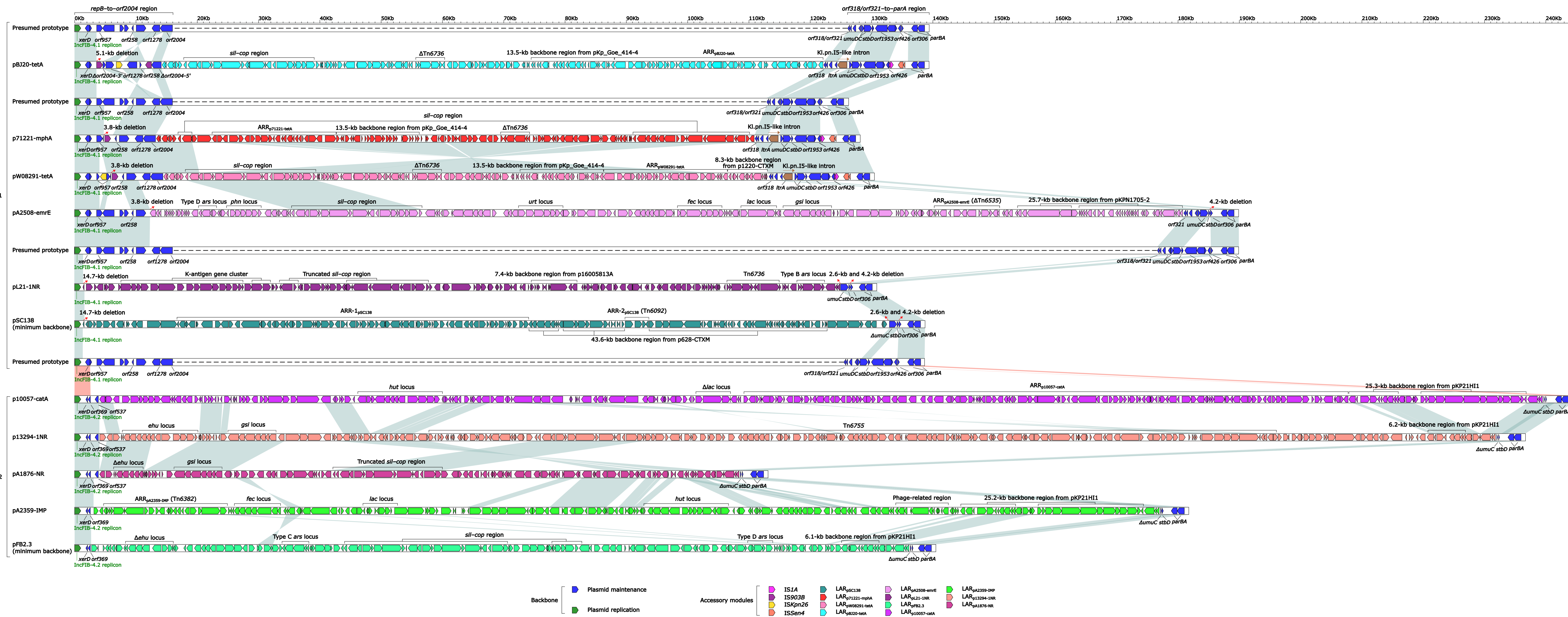


Figure S2 Linear comparison of IncFIB-4 single-replicon plasmids.

Notes: Genes are denoted by arrows. Genes, MGEs and other features are colored based on their functional classification.

Shading in light blue denotes regions of homology (nucleotide identity $\geq 95\%$), light red (nucleotide identity $< 95\%$).

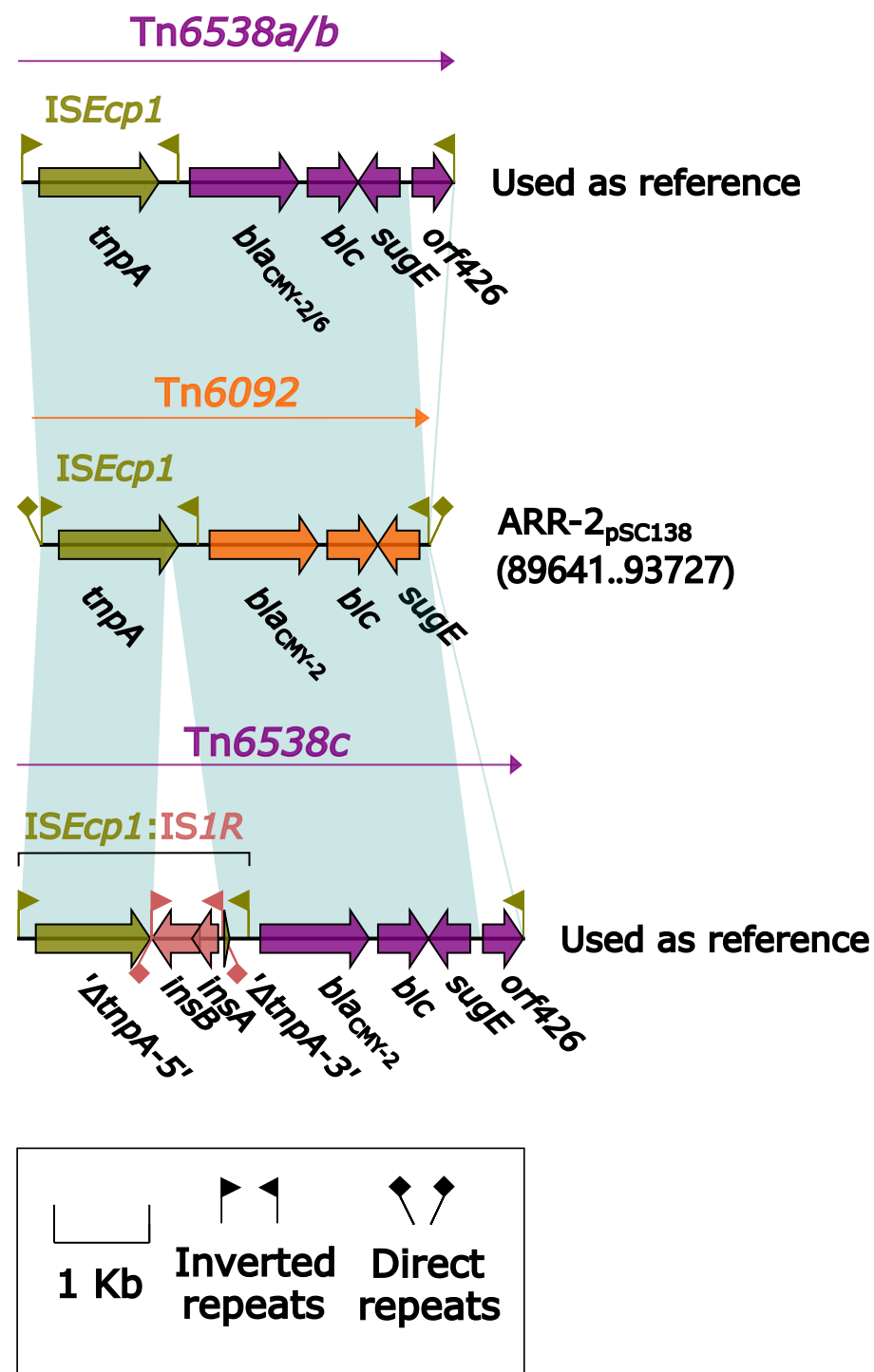


Figure S3 Organization of *ARR-2_{pSC138}*, and comparison to related regions.

Notes: Genes are denoted by arrows. Genes, MGEs and other features are colored based on their functional classification.

Shading denotes regions of homology (nucleotide identity $\geq 95\%$). Numbers in brackets indicate nucleotide positions within corresponding plasmids. Accession numbers of *Tn6538a/b/c*⁵⁸ used as reference are MF344573, MN310375, and MN310370, respectively.

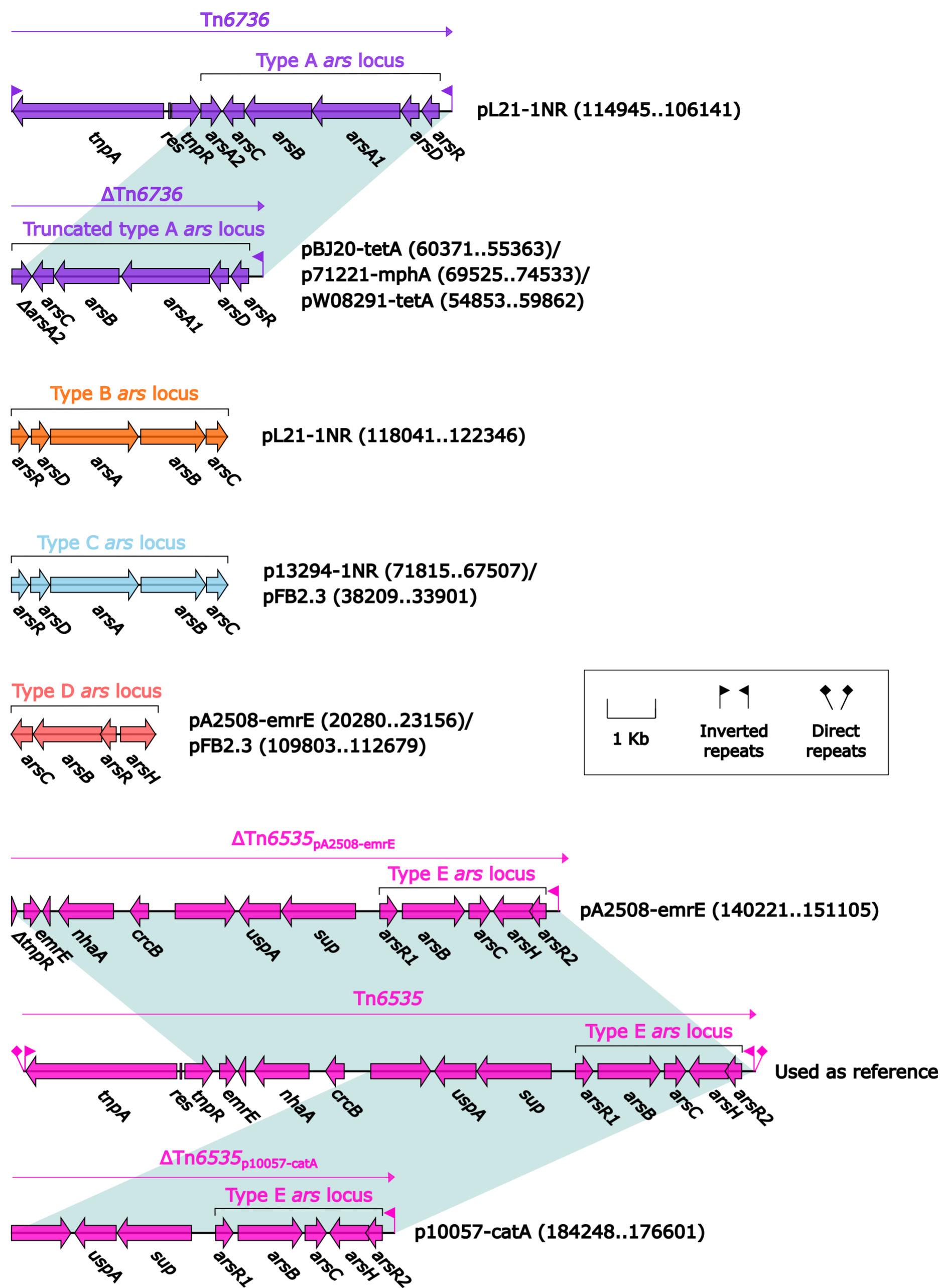


Figure S4 Organization of *ars* loci and their surrounding regions, and comparison to related regions.

Notes: Genes are denoted by arrows. Genes, MGEs and other features are colored based on their functional classification. Shading denotes regions of homology (nucleotide identity $\geq 95\%$). Numbers in brackets indicate nucleotide positions within corresponding plasmids. Accession number of Tn6535⁴⁹ used as reference is CP009706.

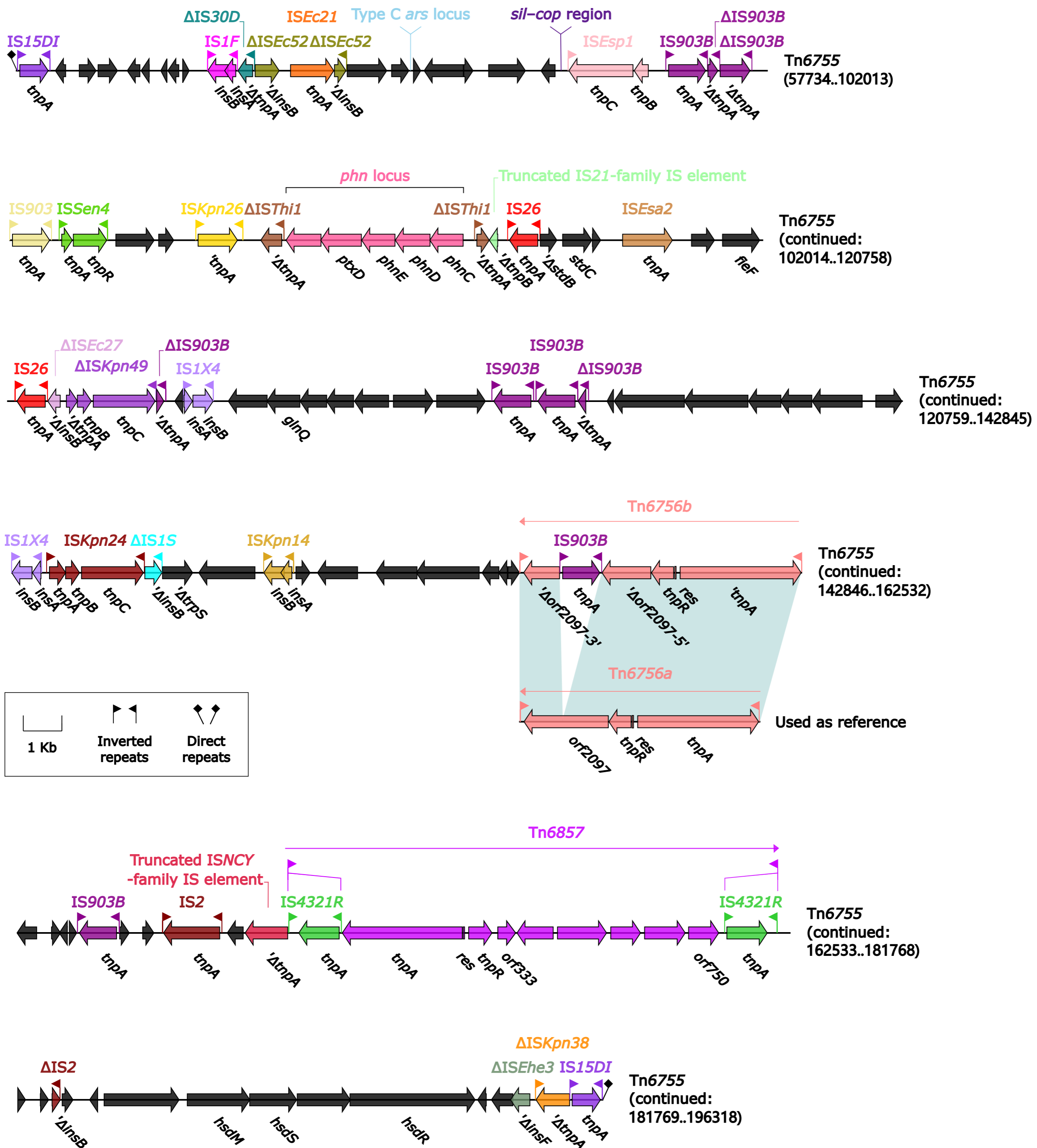


Figure S5 Organization of Tn6755_{p13294-1NR}, and comparison to related region.
Notes: Genes are denoted by arrows. Genes, MGEs and other features are colored based on their functional classification.
Shading denotes regions of homology (nucleotide identity $\geq 95\%$). Numbers in brackets indicate nucleotide positions within corresponding plasmids.
Accession number of Tn6756a used as reference is CP043513.

Table S1. Major features of bacterial strains

Isolate	Bacterium	City	Hospital	Specimen	Year
BJ20	<i>Klebsiella pneumoniae</i>	Beijing	H01	un-known	2017
71221	<i>K. pneumoniae</i>	Beijing	H02	Urine	2016
08291	<i>K. pneumoniae</i>	Zhejiang	H03	Sputum	2015
A2508	<i>K. quasipneumoniae</i>	Hainan	H04	un-known	2014
L21	<i>Leclercia adcarboxglata</i>	Guangdong	H05	Bile	2018
10057	<i>K. pneumoniae</i>	Beijing	H02	Blood	2012
13294	<i>K. quasipneumoniae</i>	Anhui	H06	Blood	2013
A1876	<i>K. quasipneumoniae</i>	Hunan	H07	un-known	2014
A2359	<i>K. pneumoniae</i>	Hunan	H08	Sputum	2014

Table S2. General features of the 11 IncFIB single-replicon plasmids

IncFIB subtype	Plasmid	Accession number	Reference	Total length (bp)	Total number of ORFs	Mean G+C content, %	Backbone length (bp)	LAR length (bp)	Location	Isolate
IncFIB-4.1	pBJ20-tetA	MN310373	This study	139,389	146	51.9	22,926	107,982	China	<i>Klebsiella pneumoniae</i> BJ20
	p71221-mpH	MN310374	This study	128,170	134	51.9	24,258	97,689	China	<i>K. pneumoniae</i> 71221
	pW08291-tetA	MN310376	This study	130,483	135	51.9	24,253	112,616	China	<i>K. Pneumoniae</i> W08291
	pA2508-emrE	MN310379	This study	189,898	194	52.6	21,176	168,722	China	<i>K. quasipneumoniae</i> A2508
	pL21-1NR	MN423365	This study	130,867	123	49.7	7,290	123,577	China	<i>Leclercia adcarboxglata</i> L21
	pSC138	AY509004	57	138,742	135	51.3	7,164	131,578	China	<i>Salmonella enterica</i> SC138
IncFIB-4.2	p10057-catA	MN423364	This study	244,456	219	51.6	8,818	235,638	China	<i>K. pneumoniae</i> 10057
	p13294-1NR	MT549899	This study	236,698	212	50.1	8,735	227,963	China	<i>K. quasipneumoniae</i> 13294
	pA1876-NR	MT570100	This study	113,128	101	50.4	8,566	104,562	China	<i>K. quasipneumoniae</i> A1876
	pA2359-IMP	MN423363	This study	181,765	161	51.8	7,688	174,077	China	<i>K. pneumoniae</i> A2359
	pFB2.3	CP014778	un-known	140,505	130	50.7	6,869	133,636	Malaysia	<i>Pluralibacter gergoviae</i> FB2

pSC138 and pFB2.3 were derived from GenBank (last accessed Dec 01, 2019), while all the other plasmids were sequenced in this study.

Table S3. Collection of IncFIB plasmids and *repB*_{IncFIB} sequences

IncFIB subtype	Plasmid	Plasmid accession number	Host bacterium
IncFIB-1.1	Plasmid F	AP001918	<i>Escherichia coli</i>
IncFIB-1.1	pO26_1	AP010954	<i>Escherichia coli</i>
IncFIB-1.1	pO103	AP010959	<i>Escherichia coli</i>
IncFIB-1.2	p16F5M1D101 DNA	AP019857	<i>Escherichia coli</i>
IncFIB-1.3	pRHB24-C12_3	CP058211	<i>Escherichia marmotae</i>
IncFIB-1.3	pRHBSTW-00605_2	CP056698	<i>Escherichia coli</i>
IncFIB-1.3	pRHBSTW-00300_2	CP056643	<i>Escherichia coli</i>
IncFIB-1.4	pCFSAN024441_01	CP024166	<i>Salmonella enterica</i>
IncFIB-1.5	pCFSAN024229	CP019175	<i>Salmonella enterica</i>
IncFIB-1.6	pCP053580	CP053580	<i>Salmonella enterica</i>
IncFIB-1.6	pCP054717	CP054717	<i>Salmonella enterica</i>
IncFIB-1.7	pC51_002	CP042483	<i>Klebsiella pneumoniae</i>
IncFIB-1.7	p12949-FIIY	MH909344	<i>Enterobacter cloacae</i>
IncFIB-1.7	pE33_002	CP042519	<i>Citrobacter freundii</i>
IncFIB-1.8	pSLT-BT	FN432031	<i>Salmonella enterica</i>
IncFIB-1.8	pSVC50	AY509003	<i>Salmonella enterica</i>
IncFIB-1.8	pKY401053	KY401053	<i>Salmonella enterica</i>
IncFIB-1.9	pCP050989	CP050989	<i>Salmonella enterica</i>
IncFIB-1.9	pCP054902	CP054902	<i>Salmonella enterica</i>
IncFIB-1.10	pS65EC	CP036244	<i>Escherichia coli</i>
IncFIB-1.10	pMAR2	CP059841	<i>Escherichia coli</i>
IncFIB-1.10	pM505-a DNA	AP023221	<i>Escherichia coli</i>
IncFIB-1.11	pCP053317	CP053317	<i>Salmonella enterica</i>

IncFIB-1.12	pCP046281	CP046281	<i>Salmonella enterica</i>
IncFIB-1.13	pC45-p2	LT991959	<i>Enterobacter cloacae</i>
IncFIB-1.14	pSA20051401.2	CP030198	<i>Salmonella enterica</i>
IncFIB-1.15	pM12X01451	CP017473	<i>Enterobacter cloacae</i>
IncFIB-1.16	pDSMZ16690	CP017185	<i>Enterobacter cloacae</i>
IncFIB-1.17	pYRW13-131	CP050813	<i>Yokenella regensburgei</i>
IncFIB-1.18	p888-76-1	CP019446	<i>Kosakonia cowanii</i>
IncFIB-1.19	pCP045299	CP045299	<i>Kosakonia arachidis</i>
IncFIB-1.20	pMSR2B	CP024638	<i>Pantoea</i> sp.
IncFIB-1.21	pPAT9B02	CP002435	<i>Pantoea</i> sp.
IncFIB-1.22	pPSP-057	CP010325	<i>Pantoea</i> sp.
IncFIB-1.22	pCP060163	CP060163	<i>Acinetobacter venetianus</i>
IncFIB-1.23	pCP032704	CP032704	<i>Pantoea dispersa</i>
IncFIB-2.1	p505108-T6SS	KY978630	<i>Cronobacter sakazakii</i>
IncFIB-2.1	pGW2	CP028976	<i>Cronobacter sakazakii</i>
IncFIB-2.1	pCS2	CP012255	<i>Cronobacter sakazakii</i>
IncFIB-2.2	pCMA1	CP013941	<i>Cronobacter malonaticus</i>
IncFIB-2.2	pCP006732	CP006732	<i>Cronobacter malonaticus</i>
IncFIB-2.3	pCUNV1	CP012258	<i>Cronobacter universalis</i>
IncFIB-2.4	pCTU1	FN543094	<i>Cronobacter turicensis</i>
IncFIB-2.5	pCDU1	CP012267	<i>Cronobacter dublinensis</i>
IncFIB-2.6	pCP017664	CP017664	<i>Cronobacter</i> sp.
IncFIB-2.7	pCCO1	CP012265	<i>Cronobacter condimenti</i>
IncFIB-2.8	pPALTYR11Z	CP019707	<i>Pantoea alhagi</i>
IncFIB-2.9	pSg66741_1	CP054057	<i>Scandinavium goeteborgense</i>

IncFIB-2.10	pEuc2	CP045722	<i>Pantoea eucalypti</i>
IncFIB-2.10	pPant3	CP022519	<i>Pantoea vagans</i>
IncFIB-2.10	pCP061085	CP061085	<i>Pantoea</i> sp.
IncFIB-2.11	pCP048036	CP048036	<i>Pantoea agglomerans</i>
IncFIB-2.11	pCP016892	CP016892	<i>Pantoea agglomerans</i>
IncFIB-2.11	pPagL15_2	CP034150	<i>Pantoea agglomerans</i>
IncFIB-2.12	pPV989-167	CP028351	<i>Pantoea vagans</i>
IncFIB-2.12	pPag1	CP001893	<i>Pantoea vagans</i>
IncFIB-2.12	pVag2	CP038855	<i>Pantoea vagans</i>
IncFIB-2.13	pHS1	CP006570	<i>Sodalis praecaptivus</i>
IncFIB-2.14	pHCM2	AL513384	<i>Salmonella enterica</i>
IncFIB-2.14	pG6809-1	KT345945	<i>Enterobacter cloacae</i>
IncFIB-2.14	pG8786	AJ698720	<i>Yersinia pestis</i>
IncFIB-2.15	pCP53-113k	CP033097	<i>Escherichia coli</i>
IncFIB-2.15	pP59A-2	CP044300	<i>Escherichia coli</i>
IncFIB-2.15	pTB212	CP033252	<i>Escherichia coli</i>
IncFIB-2.16	pLF82	CU638872	<i>Escherichia coli</i>
IncFIB-2.16	pL100-3	CP034747	<i>Escherichia coli</i>
IncFIB-2.16	pGD31-F25	CP031294	<i>Escherichia coli</i>
IncFIB-2.17	pSA20094620.2	CP030187	<i>Salmonella enterica</i>
IncFIB-2.17	pAR-0407-3	CP044180	<i>Salmonella enterica</i>
IncFIB-2.18	pRHB20-C15_2	CP057633	<i>Citrobacter</i> sp.
IncFIB-2.18	pRHB20-C16_2	CP057631	<i>Citrobacter</i> sp.
IncFIB-3.1	pPagL15_1	CP034149	<i>Pantoea agglomerans</i>
IncFIB-3.1	pCFSAN047153_1	CP034470	<i>Pantoea agglomerans</i>

IncFIB-3.1	pASB05p1	CP046723	<i>Pantoea agglomerans</i>
IncFIB-3.2	pVag1	CP038854	<i>Pantoea vagans</i>
IncFIB-3.2	pPag3	CP001895	<i>Pantoea vagans</i>
IncFIB-3.2	pCP014127	CP014127	<i>Pantoea vagans</i>
IncFIB-3.3	pPant1	CP022517	<i>Pantoea vagans</i>
IncFIB-3.3	pCP061084	CP061084	<i>Pantoea</i> sp.
IncFIB-3.3	pEuc1	CP045721	<i>Pantoea eucalypti</i>
IncFIB-3.4	pPANA10	HE617161	<i>Pantoea ananatis</i>
IncFIB-3.4	pEA320 DNA	CP028034	<i>Pantoea ananatis</i>
IncFIB-3.4	pCP035036	CP035036	<i>Pantoea ananatis</i>
IncFIB-3.5	pCP049116	CP049116	<i>Pantoea stewartii</i>
IncFIB-3.5	pDSJ10	CP017591	<i>Pantoea stewartii</i>
IncFIB-3.6	pCP060162	CP060162	<i>A. venetianus</i>
IncFIB-3.6	pPSP-3a9	CP010326	<i>Pantoea</i> sp.
IncFIB-3.7	pEM01	LN907828	<i>Erwinia</i> sp.
IncFIB-4.1	pSC138	AY509004	<i>Salmonella enterica</i>
IncFIB-4.1	pL21-1NR	MN423365	<i>Leclercia adcarboxglata</i>
IncFIB-4.1	pA2508-emrE	MN310379	<i>Klebsiella quasipneumoniae</i>
IncFIB-4.1	pBJ20-tetA	MN310373	<i>Klebsiella pneumoniae</i>
IncFIB-4.1	pW08291-tetA	MN310376	<i>Klebsiella pneumoniae</i>
IncFIB-4.1	p71221-mphA	MN310374	<i>Klebsiella pneumoniae</i>
IncFIB-4.2	pA2359-IMP	MN423363	<i>Klebsiella pneumoniae</i>
IncFIB-4.2	p13294-1NR	MT570100	<i>Klebsiella quasipneumoniae</i>
IncFIB-4.2	pA1876-NR	MT549899	<i>Klebsiella quasipneumoniae</i>
IncFIB-4.2	pFB2.3	CP014778	<i>Pluralibacter gergoviae</i>

IncFIB-4.2	p10057-catA	MN423364	<i>Klebsiella pneumoniae</i>
IncFIB-4.3	pCP051549	CP051549	<i>Phytobacter diazotrophicus</i>
IncFIB-4.3	pAF18_1	CP025983	<i>Enterobacteriaceae bacterium</i>
IncFIB-4.4	p1_090001	CP036176	<i>Klebsiella huaxiensis</i>
IncFIB-4.5	pCP029140	CP029140	<i>Klebsiella michiganensis</i>
IncFIB-4.5	pRHBSTW-00529_3	CP056420	<i>Klebsiella oxytoca</i>
IncFIB-4.6	pN55391	CP016411	<i>Salmonella enterica</i>
IncFIB-4.6	pAUSMDU00010532_01	CP045959	<i>Salmonella enterica</i>
IncFIB-4.6	pCP022140	CP022140	<i>Salmonella enterica</i>
IncFIB-4.7	pC52_001	CP042546	<i>Klebsiella michiganensis</i>
IncFIB-4.7	pCP026049	CP026049	<i>Raoultella planticola</i>
IncFIB-4.7	pK0XM1A	CP008842	<i>Klebsiella michiganensis</i>
IncFIB-4.8	pENT-1ac	CP017991	<i>Enterobacter cloacae</i>
IncFIB-4.8	pSTN0717-53-2 DNA	AP022500	<i>Enterobacter kobei</i>
IncFIB-4.9	pENTAS01	CP003027	<i>Enterobacter soli</i>
IncFIB-4.10	pECLA	CP001919	<i>Enterobacter cloacae</i>
IncFIB-4.10	pCP043854	CP043854	<i>Enterobacter hormaechei</i>
IncFIB-4.10	pLS999207	LS999207	<i>Enterobacter hormaechei</i>
IncFIB-4.11	pRHBSTW-00938_2	CP055905	<i>Klebsiella aerogenes</i>
IncFIB-4.12	pCP017663	CP017663	<i>Cronobacter</i> sp.
IncFIB-5.1	pEC881_2	CP019027	<i>Escherichia coli</i>
IncFIB-5.1	pRHB13-C13_2	CP057834	<i>Escherichia coli</i>
IncFIB-5.1	pECOH89	HG530657	<i>Escherichia coli</i>
IncFIB-5.2	pCFSAN004177P_01	CP012496	<i>Escherichia coli</i>
IncFIB-5.2	pCFSAN004176P_01	CP012492	<i>Escherichia coli</i>

IncFIB-5.3	AnCo3	KY515226	<i>Salmonella enterica</i>
IncFIB-5.3	pSTM_Phi	KP763470	<i>Salmonella enterica</i>
IncFIB-5.3	pSAN1-1735	CP014707	<i>Salmonella enterica</i>
IncFIB-5.4	pCS	CP012254	<i>Cronobacter sakazakii</i>
IncFIB-5.4	pCsaCS931a	CP027108	<i>Cronobacter sakazakii</i>
IncFIB-5.5	pB16KP0177-3	CP052527	<i>Klebsiella pneumoniae</i>
IncFIB-5.5	pC16KP0189-2	CP052416	<i>Klebsiella pneumoniae</i>
IncFIB-5.5	pKPHS1	CP003223	<i>Klebsiella pneumoniae</i>
IncFIB-5.6	pCAV1015-111	CP017931	<i>Klebsiella oxytoca</i>
IncFIB-5.6	pRHBSTW-00909_5	CP056140	<i>Klebsiella michiganensis</i>
IncFIB-5.6	pCAV1752-111	CP018360	<i>Klebsiella oxytoca</i>
IncFIB-5.7	p1761_03	CP039977	<i>Klebsiella pneumoniae</i>
IncFIB-5.7	pCP032196	CP032196	<i>Klebsiella pneumoniae</i>
IncFIB-5.7	pRHB30-C05_4	CP057316	<i>Klebsiella pneumoniae</i>
IncFIB-6.1	pNDM-Mar	JN420336	<i>Klebsiella pneumoniae</i>
IncFIB-6.1	pE20-HI3	MG288682	<i>Klebsiella aerogenes</i>
IncFIB-6.1	pENVA	HG918041	<i>Klebsiella pneumoniae</i>
IncFIB-6.2	pKP18-31-IMP,KPC	MN661402	<i>Klebsiella quasipneumoniae</i>
IncFIB-6.2	pA324-IMP	MF344566	<i>Klebsiella michiganensis</i>
IncFIB-6.2	pKOX_R1	CP003684	<i>Enterobacter cloacae</i>
IncFIB-7.1	pEC316_2	CP018955	<i>Escherichia coli</i>
IncFIB-7.1	pRHBSTW-00204_2	CP056656	<i>Escherichia coli</i>
IncFIB-7.1	pQil-IT	JN233705	<i>Klebsiella pneumoniae</i>

*rep*_{IncFIB} sequences of the corresponding plasmids were listed below:

>Plasmid F (AP001918)

GTGGATAAGTTCGTCGGGTGAGCTGGTGACACTGACACCAAACAATAACAACACCGTACAACCTGTGGCGCTGATGCGTCTGGGCGTTTTTGTACCGACCCTTA

AATCACTGAAGAACAGTAAAAAATACACTGTCACGTAAGTACTGATGCCACGGAAGAGCTGACTCGTCTTCCCTGGCCCGTGCTGAGGGATTGATAAGGTTGAGATCACCGGCCCGCCTGGATATGGATAACGATTTCAAGACCTGGGTGGGGATCATTATTCTTTGCCCGCCATAACGTGATTGGTGACAAAGTTGAACTGCCTTTTGTGAGTTTGCAAACTGTGTGGTATACTTCAAGCCAGTCATCCCGCAGGCTGCGTGAGCGCATCAGCCCTTCCCTGAAGCGCATTGCCGGTACCGGTATCTCGTTTTCCCGTACCGATGAGAAGCACACCCGGGAATACATCACCCATCTGGTACAGTCAGCCTACTACGATACTGAGCGGGATATTGTTTCAGTTACAGGCTGATCCCCGTCTGTTTGAAGTGTACCAGTTTGACAGAAAAGTCCTTCTCCAGCTTAAGGCGATTAATGCCCTGAAGCGACGGGAGTCCGCCAGGCACTCTACACCTTTATAGAGAGCCTGCCCGGGATCCGGCACCGATATCGCTGGCGCGGCTGCGTGCACGCCTCAATCTGAAGTCTCCTGTATTTCCAGAACAGACGGTCAGACGGGCAATGGAGCAGTTGCGCGAGATTGGATATCTTGATTACACGGAGATCCAGCGGGGGCGGACAAAATTCTTCTGTATTACTACCGGCGTCCCCGGTTAAAAGCGCCGAATGATGAGAGTAAGGAAAATCCGTTGCCACCTTACCTGCGGAAAAAGTCAGTCCGGAGATGGCGGAGAACTTGCCTGCTTGAAAACTGGGCATCACACTGGATGACCTGGAAAACTCTTCAAATCCCGCTGA

>pO26_1 (AP010954)

GTGGATAAGTTCGTCGGGTGAGCTGGTGACACTGACACCAACAATAACAACACCGTACAACCTGTGGCGCTGATGCGTCTGGGCGTTTTTGTACCGACCCTTAATCACTGAAGAACAGTAAAAAATACACTGTCACGTAAGTACTGATGCCACGGAAGAGCTGACACGTCTTCCCTGGCCCGTGCTGAGGGATTGATAAGGTTGAGATCACCGGCCCGCCTGGATATGGATAACGATTTCAAGACCTGGGTGGGAATCATTATTCTTTGCCCGCCATAACGTAATTGGTGACAAAGTTGAACTGCCTTTTGTGAGTTTGCAAACTGTGTGGTATACTTCAAGCCAGTCATCCCGCAGGCTGCGTGAGCGCATCAGCCCTTCCCTGAAACGCATTGCCGGTACCGGTATCTCCTTTTCCCGCACCGATGAGAAGCACACCCGGGAATATATCACCCATCTGGTACAGTCAGCCTACTACGATACTGAACGGGATATTGTTTCAGTTACAGGCTGATCCCCGCCTTTTTGAAGTGTACCAGTTTGACCGGAAAGTGCTGCTGCAGCTCAAGGCCATCAATGCCCTGAAGCGACGGGAGTCCGCCAGGCACTTTACACCTTTATAGAGAGCCTGCCCGGGATCCGGCACCGATATCGCTGGCGCGGCTGCGTGCCCGCTCAATCTGAAGTCTCCTGTATTTCCAGAACAGACGGTAGACGGGCAATGGAGCAGTTGCGCGAGATTGGATATCTTGATTACACGGAGATCCAGCGGGGGCGGACAAAATTCTTCTGTATTACTACCGGCGTCCCCGGTTAAAAGCGCCGAATGATGAGAGTAAGGAAAATCCGTTGCCACCTTACCTGCGGAAAAAGTCAGTCCGGAGATGGCGGAGAACTTGCCTGCTTGAAAACTGGGCATCACGCTGGATGACCTGGAAAACTCTTCAAATCCCGCTGA

>pO103 (AP010959)

GTGGATAAGTCTCCGGGTGAGCTGGTGACACTGACACCAACAATAACAACACCGTACAACCTGTGGCGCTGATGCGTCTGGGCGTCTTTGTACCGACCCTTAATCACTGAAGAACAGTAAAAAATACACTGTCACGTAAGTACTGATGCCACGGAAGAACTGACACGTCTTCCCTGGCCCGTGAGAGGGATTGATAAGGTTGAGATCACCGGCCCGGCTGGATATGGATAACGATTTCAAGACTTGGGTGGGGATCATTATTCTTTGCCCGCCATAACGTGACTGGTGACAAAGTTGAACTACCTTTTGTGAGTTTGCAAACTGTGTGGTATACTTCAAACCAGTCATCACGCAGGCTGCGTGAGCGCATCAGCCCTTCCCTGAAACGCATTGCCGGTACCGGTGATCTCCTTTTCCCGCACCGATGAGAAGCACACCCGGGAATACATCACTCATCTGGTACAGTCAGCCTACTACGATACTGAACGGGATATTGTTTCAGTTACAGG

CTGATCCCCGCCTTTTTGAACTGTACCAGTTTGACAGAAAAGTTCTTCTCCAGCTTAAGGCGATTAATGCCCTGAAGCGACGGGAGTCCGCCCAGGCACTCTA
CACATTTATAGAGAGCCTGCCCCGGGATCCGGCACCGATATCGCTGGCGCGGCTGCGTGCACGCCTCAATCTGAAGTCTCCGGTATTTTCCCAGAACCAGACG
GTCAGACGGGCAATGGAGCAATTGCGTGAGATTGGATATCTTGATTACACTGAGATCCAGCGGGGACGGACAAAACCTCTTCTGTATTCACTACCGGCGTCCCC
GGTAAAAGCGCCGAATGATGAGAGTAAGGAAAATCCGTTGCCACCTTCACCTGCGGAAAAAGTCAGTCCGGAGATGGCGGAGAAGCTTGCCCTGCTTGAGA
AACTGGGCATCACGCTGGATGACCTGGAAAACTCTTCAAATCCCGCTGA

>p16F5M1D101 DNA (AP019857)

GTGGATAAGTCCTCCGGTGAGCTGGTGACACTGACACCAAACAATAAACAACACTGTACAACCTGTGGTCTTGATGCGTCTTGGGGTGTGTTGTGCCGACCCTTA
AGTCACTAAAGAACAGTAAAAAAAATACACTTGCACGCACCGATGCCACGGAAGAAGTACGCGCTCTTCCCTAGCCCCGGGCAGAGGGATTGATAAGGTTG
AAATCACCGGCCCGACTGGATATGGATAACGATTTCAAACCTGGGTGGGGATCATTCAATCCTTTGCCCGTCATAATGTGATTGGTGATAAAGTTGAACTGC
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>pRHB24-C12_3 (CP058211)

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>pRHBSTW-00605_2 (CP056698)

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>pRHBSTW-00300_2 (CP056643)

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>pCFSAN024229 (CP019175)

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>pCP053580 (CP053580)

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>pCP054717 (CP054717)

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>p12949-FIIY (MH909344)

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>pSLT-BT (FN432031)

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>pSVC50 (AY509003)

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>pKY401053 (KY401053)

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>pCP050989 (CP050989)

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>pCP054902 (CP054902)

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>pMAR2 (CP059841)

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>pM505-a DNA (AP023221)

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>pCP053317 (CP053317)

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>pCP046281 (CP046281)

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>pC45-p2 (LT991959)

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>pSA20051401.2 (CP030198)

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>pM12X01451 (CP017473)

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>pDSMZ16690 (CP017185)

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>pYRW13-131 (CP050813)

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>p888-76-1 (CP019446)

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>pCP045299 (CP045299)

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>pMSR2B (CP024638)

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>pPAT9B02 (CP002435)

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>pPSP-057 (CP010325)

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>pCP060163 (CP060163)

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>pCP032704 (CP032704)

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>p505108-T6SS (KY978630)

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>pCP017664 (CP017664)

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>pPagL15_2 (CP034150)

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>pPV989-167 (CP028351)

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>pPag1 (CP001893)

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>pVag2 (CP038855)

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>pHS1 (CP006570)

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>pHCM2 (AL513384)

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>pG6809-1 (KT345945)

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>pG8786 (AJ698720)

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>pL100-3 (CP034747)

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>pGD31-F25 (CP031294)

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>pSA20094620.2 (CP030187)

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>pAR-0407-3 (CP044180)

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>pRHB20-C15_2 (CP057633)

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>pRHB20-C16_2 (CP057631)

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>pPagL15_1 (CP034149)

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>pCFSAN047153_1 (CP034470)

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>pASB05p1 (CP046723)

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>pVag1 (CP038854)

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>pPag3 (CP001895)

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>pCP014127 (CP014127)

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>pPant1 (CP022517)

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>pCP061084 (CP061084)

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>pEuc1 (CP045721)

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>pPANA10 (HE617161)

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>pEA320 DNA (CP028034)

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>pCP035036 (CP035036)

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>pCP049116 (CP049116)

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>pDSJ10 (CP017591)

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>pCP060162 (CP060162)

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>pPSP-3a9 (CP010326)

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>pEM01 (LN907828)

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>pSC138 (AY509004)

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>pL21-1NR (MN423365)

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>pA2508-emrE (MN310379)

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>pBJ20-tetA (MN310373)

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>pW08291-tetA (MN310376)

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>p71221-mpH (MN310374)

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>pA2359-IMP (MN423363)

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>p13294-1NR (MT570100)

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>pA1876-NR (MT549899)

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>pFB2.3 (CP014778)

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>p10057-catA (MN423364)

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>pCP051549 (CP051549)

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>pAF18_1 (CP025983)

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>p1_090001 (CP036176)

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>pCP029140 (CP029140)

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>pRHBSTW-00529_3 (CP056420)

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>pC52_001 (CP042546)

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>pRHB13-C13_2 (CP057834)

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>pECOH89 (HG530657)

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>pCFSAN004177P_01 (CP012496)

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>AnCo3 (KY515226)

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>pSTM_Phi (KP763470)

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>pSAN1-1735 (CP014707)

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>pCS (CP012254)

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>pB16KP0177-3 (CP052527)

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>pC16KP0189-2 (CP052416)

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>pKPHS1 (CP003223)

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>pCAV1015-111 (CP017931)

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>pRHBSTW-00909_5 (CP056140)

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>pCAV1752-111 (CP018360)

ATGTCCACAGCCAAGAAAAAAGGCAGAAAAACATAGCTGAAGATTCAGAAAATGAGATCTTTGATGTGGACTCATCCACAGAGCCAGATGACCTTGATGAA
GGCTCTCTCAAACTTTATACAGGCGATCTGACCCCCAATAGCAACAACACAGTTCAACCTATCGCGTTAATGCGACTTGGTTTATTTGTCCCGACACTAAAGGG
CACAAGGAATAGTAAACGAAACAAGTCGAATGAGATAGACGCCTCGAAAGAGCTGGTTCAGCTGGAAGTCGCTCGTTCCGAAGGTTATGCCGACATCAAAT
CACCGGCCCCAGACTGGACATGGATCACGACTTCAAACATGGGTTGGGGTGGTTCGTTCTTTAGCTGAATACGGCGAGGCCAGTGGGCGCGTGGAGTTGAG
CATTACGAAGTTTGCAAATTTCTGCGGGCTATCCTTCATCGAAATCCGCAAAACATTACGTGACAGGCTCACAAATAGCCTTCTGAAAATAATGCGGACGACGC
TTTCTTCCAGCGCACGTATGAAGAGAAGAAGTCGACGGCTCGAATAAGATCTCGCTCCTGATGATGCACCTCATAAACAGCGTTGATTACAACGAGAAGAA
AGACACCATCATTTTTTCAGGCCGAGCCTAAGCTGTCAGAGCTGTATAGGTTGACCATAAGGTGCTCCTGCAGCTGAAGGTCATAAACAAACTCCCGCGTAAG
GAGACGGCCAGGCGCTGTATACGTTTCATCGAAAGTCTCCCAACAAAGCCGGCCCCATCTCCCTAGCGAGGCTAAGAGCCAGACTCAATCTGAGTTCGAAC
AACGTTAGCTCCCAAATCAGACGATCCGAAATGGCCTCAAGTCTCTCCAGGAACTTGGGTATCTCGACTACAGCGAGATCAAGCGTGGCCGGTCTGTCTATAT
CCAAATTCATAACCGAAATCCGAAGCTGAAAGTCACTGGTGGCAAGCCTGATGAACCACCCAAAGAGAAGCCTCCAGTGGAAGGTAATTCGGACACTAAGCA
GAATCTTATCAATAAGATAGCTGAGCTTTCCAAGGACTTGACCCCCGAGAATATTAGGCTTATCGAGATCCTTAGCAACAGCCTGAAGCTTGTTTGA

>p1761_03 (CP039977)

ATGTCCACAGGCCAAAAAAGAAGAAAGAAAACATACCGTTAATCGATGATGATGACGCGATCGACGAAAGTGTTCCGGCGTTATTACAGGCGACCTCACC
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AGATAGACGCCTCAAAGAAGTGGTGCAACTGGAGGTTGCGAGATCTGAGGGTTATTCCGATATCAAATAACCGGTCCACGTCTCGATATGGATCACGACTTC
AAGACGTGGGTTGGTGTCTGTCGATCACTTGCCGAGTATGGGGAGGCCAGTGGGCGCGTTGAGCTAAGCATCACGAAGTTTGCCAAGTTCTGTGGGTATCCAT
CTTCCCAGATACGCAAGACGCTGCGAGACAGGATTACGAACAGCCTGCTGAAGATAATGCGCACAACGCTTTTCGTTCCAGCGCACATACGAAGAGAAGAACG
TGGACGGCTCGAACAAGATATCTCTGCTCATGGTTCATCTGGTGAATAGCGTGGATTACAATGAGAAAAATGACACCATCATATTTACGCCGAACCAAAGCTG
TCAGAGCTATACCGTTTTGACCACAAAGTTCTTCTCCAAGTGAAGGTCATCAACAACTTCCACGTAAGAAACCGCCAGGCGCTATACACCTTCATTGAAA
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>pCP032196 (CP032196)

ATGTCCACAGGCAAAAAAAAAAGAAGAAAGAAAACATACCGTTAATCGATGATGATGACGCGATCGACGAAAGTGTTCCGGCGTTATTCACAGGCGACCTCACC
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AGATAGACGCCTCAAAGAAGACTGGTGCAACTGGAGGTTGCGAGATCTGAGGGTTATTCCGATATCAAATAACCGGTCCACGTCTCGATATGGATCACGACTTC
AAGACGTGGGTTGGTGTCTGTCGATCACTTGCCGAGTATGGGGAGGCCAGTGGGCGCGTTGAGCTAAGCATCACGAAGTTTGCCAAGTTCTGTGGGTATCCAT
CTTCCCAGATACGCAAGACGCTGCGAGACAGGATTACGAACAGCCTGCTGAAGATAATGCGCACAACGCTTTCGTTCCAGCGCACATACGAAGAGAAGAACG
TGGACGGCTCGAACAAGATATCTCTGCTCATGGTTCATCTGGTGAATAGCGTGGATTACAATGAGAAAAATGACACCATCATATTTACGCCGAACCAAAGCTG
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>pRHB30-C05_4 (CP057316)

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CAAGACGTGGGTTGGTGTCTGTCGATCACTTGCCGAGTATGGGGAGGCCAGTGGGCGCGTTGAGCTAAGCATCACGAAGTTTGCCAAGTTCTGCGGGTATCCA
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AGAAGATAGCTGAACTTTCTGCGGATTTGACGCCTGAGAATATAAAGCTAATTGAGATACTTAGTAACGGTCTGAAGTTGCTTTGA

>pNDM-Mar (JN420336)

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GCTTCCTTTTAGCACCTTCCTTAAAAATTGTGGGTTTGACCCCTCGAGGTGCAATAAGCCCATGAAACAACGTATCGATGCTTCGATGATTAAGTAAAATGG
TCACTTTTCAGTTCCGCAATGAAGATTCAACCCCTCACGACCGGCCTCATTAAGTGGGCACGGTACAACATAAAAAACCAATGAGATTGAGATAGAGGGAGATCC
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CGTTGAAGGAGCTTGAGCAAATCGGTTACTTGCAATACAGAGAAGAGAAGATTGGTCGGTCAATAAAGTTCCACATACTTAAACGAAGTCCCTCGCTGGATGC
CAAAAAGACCATCCTGGTCCCGGCTGCACATAACCCAGCTGATGACGATGCACTGATACATAAACTTAAAATGCTGAAGGCTGCAGGTTACTCAGAACTGAG
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>pE20-HI3 (MG288682)

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GCTTCCTTTTAGCACCTTCCTTAAAAATTGTGGGTTTGACCCCTCGAGGTGCAATAAGCCCATGAAACAACGTATCGATGCTTCGATGATTAAGTAAAATGG
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CGCCAGCCTACCTAAAGACCCTGCACCAATCTCAATGAAACGCTTTCGCGACCGTTTACGGCTAACGTCCCCAGTAGCCTCTCAGAACATGATCATTGCGCGTT
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CAAAAAGACCATCCTGGTCCCGGCTGCACATAACCCAGCTGATGACGATGCACTGATACATAAACTTAAAATGCTGAAGGCTGCAGGTTACTCAGAACTGAG
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>pENVA (HG918041)

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GCTTCCTTTTAGCACCTTCCTTAAAAATTGTGGGTTTGACCCCTCGAGGTGCAATAAGCCCATGAAACAACGTATCGATGCTTCGATGATTAAACTGAAAATGG
TCACTTTTCAGTTCCGCAATGAAGATTCAACCCCTCACGACCGGCCTCATTAACTGGGCACGGTACAACATAAAAACCAATGAGATTGAGATAGAGGGAGATCC
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CGTTGAAGGAGCTTGAGCAAATCGGTTACTTGCAATACAGAGAAGAGAAGATTGGTCGGTCAATAAAGTTCCACATACTTAAACGAAGTCCCTCGCTGGATGC
CAAAAAGACCATCCTGGTCCCGGCTGCACATAACCCAGCTGATGACGATGCACTGATACATAAACTTAAAATGCTGAAGGCTGCAGGTTACTCAGAACTGAG
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>pKP18-31-IMP,KPC (MN661402)

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TATGGACGTGTCAAACGAGCTCCAGCATATGGAGGTCGCTTCCAGTGAAGGGTACAAGGAGATCTCCCTATCTAGCCCCGGCTGGATATGAACACCGATTTTC
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GACCCGACACGATCGAATAAGCACATGAAAGCACGTATCGACGCCTCGATGGTTAAGCTAAGAATGGTGACATTTTCAGTTCAGAAACGAAGATTCCACGCTTA
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TGAAACGATTCCGAGACCGACTGCGGTTAACTTCCCACGTCTCCGCTCAGAATGAAATTATACGGCGCTCACTTCGTGAGCTACATGAGATAGGTTATCTGCAA
TACCATGAAGAGAAGGTCGGTAGAAATATCAAATTTTCATATCCTAAAAAGAAGCCCATCTCTCGGTGCGAAAAAGGACCCTATTCAGGCACCGGCACAAAATG
CCCCGATCCTGGATGACCCGTTGCTTGAAAACTGAAAATGATGAAAGCAGCTGGATTTACCGGCGAAGAGATTGCTGCAGTTCTTGTTCATCGATAAGATG
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>pA324-IMP (MF344566)

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TATGGACGTGTCAAACGAGCTCCAGCATATGGAGGTCGCTTCCAGTGAAGGGTACAAGGAGATCTCCCTATCTAGCCCCGGCTGGATATGAACACCGATTTTC
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GACCCGACACGATCGAATAAGCACATGAAAGCACGTATCGACGCCTCGATGGTTAAGCTAAGAATGGTGACATTTTCAGTTCAGAAACGAAGATTCCACGCTTA
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TGAAACGATTCCGAGACCGACTGCGGTTAACTTCCCACGTCTCCGCTCAGAATGAAATTATACGGCGCTCACTTCGTGAGCTACATGAGATAGGTTATCTGCAA
TACCATGAAGAGAAGGTCGGTAGAAATATCAAATTTTCATATCCTAAAAAGAAGCCCATCTCTCGGTGCGAAAAAGGACCCTATTCAGGCACCGGCACAAAATG
CCCCGATCCTGGATGACCCGTTGCTTGAAAACTGAAAATGATGAAAGCAGCTGGATTTACCGGCGAAGAGATTGCTGCAGTTCTTGTTCATCGATAAGATG
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>pKOX_R1 (CP003684)

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TATGGACGTGTCAAACGAGCTCCAGCATATGGAGGTCGCTTCCAGTGAAGGGTACAAGGAGATCTCCCTATCTAGCCCCGGCTGGATATGAACACCGATTTTC
GAGTCTGGCTGGGAATTGTCAGGACGATTCACGATTTTAACGATGTCTCAGTTTCGGGAAGAATAAAATTACCTTTCTCAACGTTCTCAAAAACGTGGATTT
GACCCGACACGATCGAATAAGCACATGAAAGCACGTATCGACGCCTCGATGGTTAAGCTAAGAATGGTGACATTTTCAGTTCAGAAACGAAGATTCCACGCTTA
CTACCGGCCTGATAAACTGGGCACGTTATAACATCAAAACAAATGAGATCGAGATAGAAGGTGACCCCCGCATCAAAGAGCTTTACGCGATTGATTATAAGGTT
TTTTTTCGGCTTAAGGCACTGGACAGCTTACAACGAAAAGAGTCTGCACAGGCGTTGTATACCTATCTGGCGAGCTTGCCGAAGAACCCGGCCCCAATCAGCA
TGAAACGATTCCGAGACCGACTGCGGTTAACTTCCCACGTCTCCGCTCAGAATGAAATTATACGGCGCTCACTTCGTGAGCTACATGAGATAGGTTATCTGCAA
TACCATGAAGAGAAGGTCGGTAGAAATATCAAATTTTCATATCCTAAAAAGAAGCCCATCTCTCGGTGCGAAAAAGGACCCTATTCAGGCACCGGCACAAAATG
CCCCGATCCTGGATGACCCGTTGCTTGAAAACTGAAAATGATGAAAGCAGCTGGATTTACCGGCGAAGAGATTGCTGCAGTTCTTGTTCATCGATAAGATG
AAAAAGATAAACGGCAAGCATCATGATGAAGAGGCTGAAGACGCGGATTTTAGCGAGGAGTGA

>pEC316_2 (CP018955)

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CAAGAGCCGAAGGTTATACAGACATCCGTATTACCGGCCACGACTTTCGATGGAGACTGACTTCAAGGTGTGGGTTGGCATCATTCTCGGTTTTTCGAAATAT
GGCTTAAACAGCAGCACCATTGAACTTCCATTCAGCGAGTTTGCTACATTATGCGGGTTTAGCTCAAAGGACAAAGATAAAGGACTCAGAACGCGCTTGGCCG

ACTCTCTTATTCGTCTTCGCAGCACAACTATCAAGCTTGCCTCAGAAAAGGATCGGAATGGTGTGTATCTGGTCTGTAAAGTCGTGGTAAGTGGGACGAAAA
GACGACATCATGGAACCTACCGCCGATGAGTCTCTTTGGGAGCTTTATCAATTCGACCGTCAGGTGCTTCTGCAGATGTTATAATCCGGCAACTTGCGAACAA
AGGGACAGCACAGGCCCTATACACTTTCATTGAGAGCCTTCCTGAGCGACCAATACCACTATCGTTCGCGCGTATTAAACGTGCGCTAATGCTTACCTCACCCA
ATAACCAGCAGAATCGAGTGATTAACAAGGCTATAGACGAGCTTAAAGCGGTCGGTATTTAGATGGCGATGTCGTTAAAAAGGATGGTGAATGGCACTTAATC
ATAACCCGTGCGACGCCTAGGCCAGACATTAAGGCTATGTCTGAAGCCTTAAAAGATGGAGAGTAA

>pRHBSTW-00204_2 (CP056656)

ATGTATAAGAAAAGTGTAGATCTATCACTTGAATCGGTTCTCGTAGAAATCGATGAAAATAAGAAGCTCATGCCTTCCAGAAACGCTACTGTCCAGCCTGTAGC
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ACTCTCTTATTCGTCTTCGCAGCACAACTATCAAGCTTGCCTCAGAAAAGGATCGGAATGGTGTGTATCTGGTCTGTAAAGTCGTGGTAAGTGGGACGAAAA
GACGACATCATGGAACCTACCGCCGATGAGTCTCTTTGGGAGCTTTATCAATTCGACCGTCAGGTGCTTCTGCAGATGTTATAATCCGGCAACTTGCGAACAA
AGGGACAGCACAGGCCCTATACACTTTCATTGAGAGCCTTCCTGAGCGACCAATACCACTATCGTTCGCGCGTATTAAACGTGCGCTAATGCTTACCTCACCCA
ATAACCAGCAGAATCGAGTGATTAACAAGGCTATAGACGAGCTTAAAGCGGTCGGTATTTAGATGGCGATGTCGTTAAAAAGGATGGTGAATGGCACTTAATC
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>pQil-IT (JN233705)

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GCAAGAGCCGAAGGTTATACAGACATCCGTATTACCGGCCACGACTTTCGATGGAGACTGACTTCAAGGTGTGGGTTGGCATCATTCTCGCGTTTTCGAAATA
TGGCTTAAACAGCAGCACCATTGAACTTCCATTCAGCGAGTTTGCTACATTCTGCGGGTTTAGCTCAAAGGACAAAGATAAAGGACTCAGAACGCGCTTGGCC
GACTCTCTTATTCGTCTTCGCAGCACAACTATCAAGCTTGCCTCAGAAAAGGATCGGAATGGTGTGTATCTGGTCTGTAAAGTCGTGGTAAGTGGGACGAAAA
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AAGGGACAGCACAGGCCCTATACACTTTCATTGAGAGCCTTCCTGAGCGACCAATACCACTATCGTTCGCGCGTATTAAACGTGCGCTAATGCTTACCTCACCC
AATAACCAGCAGAATCGAGTGATTAACAAGGCTATAGACGAGCTTAAAGCGGTCGGTATTTAGATGGCGATGTCGTTAAAAAGGATGGTGAATGGCACTTAAT
CATAACCCGTGCGACGCCTAGGCCAGACATTAAGGCTATGTCTGAAGCCTTAAAAGATGGAGAGTAA

Table S4. Accessory modules in the 11 IncFIB single-replicon plasmids

IncFIB subtype	Plasmid	Accessory modules			The other accessory modules besides LAR
		Key loci within LAR			
		Antibiotic resistance	Heavy metal resistance	Metabolism	
IncFIB-4.1	pBJ20-tetA	ARR _{pBJ20-tetA}	<i>sil-cop</i> region and Δ Tn6736 (containing type A <i>ars</i> locus)		ISK _{pn26} , IS903B, IS1A, ISSen4 and Kl.pn.I5-like intron
	p71221-mpH	ARR _{p71221-mpH}	<i>sil-cop</i> region and Δ Tn6736 (containing type A <i>ars</i> locus)		IS903B, IS1A, ISSen4 and Kl.pn.I5-like intron
	pW08291-tetA	ARR _{pW08291-tetA}	<i>sil-cop</i> region and Δ Tn6736 (containing type A <i>ars</i> locus)		ISK _{pn26} , IS903B, IS1A, ISSen4 and Kl.pn.I5-like intron
	pA2508-emrE	ARR _{pA2508-emrE} (Δ Tn6535)	<i>sil-cop</i> region, type D <i>ars</i> locus and ARR _{pA2508-emrE} (containing type E <i>ars</i> locus)	<i>phn</i> locus, <i>urt</i> locus, <i>fec</i> locus, <i>lac</i> locus and <i>gsi</i> locus	
	pL21-1NR		Truncated <i>sil-cop</i> region, type B <i>ars</i> locus and Tn6736	K-antigen gene cluster	
	pSC138	ARR-1 _{pSC138} and ARR-2 _{pSC138} (Tn6092)			
IncFIB-4.2	p10057-catA	ARR _{p10057-catA}	ARR _{p10057-catA} (containing type E <i>ars</i> locus)	<i>hut</i> locus and Δ <i>lac</i> locus	
	p13294-1NR		Tn6755 (containing type C <i>ars</i> locus and <i>sil-cop</i> region)	<i>ehu</i> locus, <i>gsi</i> locus and Tn6755 (containing <i>phn</i> locus)	
	pA1876-NR		Truncated <i>sil-cop</i> region	Δ <i>ehu</i> locus and <i>gsi</i> locus	
	pA2359-IMP	ARR _{pA2359-IMP} (Tn6382)	ARR _{pA2359-IMP} (containing <i>mer</i> locus)	<i>fec</i> locus, <i>lac</i> locus and <i>hut</i> locus	
	pFB2.3		<i>sil-cop</i> region, and type C and D <i>ars</i> loci	Δ <i>ehu</i> locus	

Table S5. Resistance genes in the 11 IncFIB single-replicon plasmids

IncFIB subtype	Plasmid	Resistance marker	Resistance phenotype	Nucleotide position	Region located
IncFIB-4.1	pBJ20-tetA	<i>sil</i>	Silver resistance	17793..27670 28574..31021	<i>sil-cop</i> region
		<i>cop</i>	Copper resistance	32319..39851	
		Type A <i>ars</i> locus	Arsenic resistance	55638..60371	Δ Tn6736
		<i>tetA(A)</i>	Tetracycline resistance	91288..92487	ARR _{pBJ20-tetA}
		<i>dfrA1</i>	Trimethoprim resistance	93720..94193	
		<i>qacED1</i>	Quaternary ammonium compound resistance	94897..95244	
		<i>sul1</i>	Sulphonamide resistance	95238..96077	
		<i>mph(A)</i>	Macrolide resistance	100288..101193	
		<i>aphA1</i>	Aminoglycoside resistance	102170..102985	
		<i>bla_{SHV-12}</i>	β -lactam resistance	106570..107430	
		<i>qnrS1</i>	Quinolone resistance	111439..112095	
		<i>bla_{LAP-2}</i>	β -lactam resistance	113692..114549	
		<i>tmrB</i>	Tunicamycin resistance	118881..119423	
	<i>aacC2</i>	Aminoglycoside resistance	119436..120296		
	p71221-mphA	<i>bla_{SHV-12}</i>	β -lactam resistance	23293..24153	ARR _{p71221-mphA}
		<i>aphA1</i>	Aminoglycoside resistance	27738..28553	
		<i>mph(A)</i>	Macrolide resistance	29530..30435	
		<i>sul1</i>	Sulphonamide resistance	34646..35485	
		<i>qacED1</i>	Quaternary ammonium compound resistance	35479..35826	

		<i>dfrA1</i>	Trimethoprim resistance	36530..37003	Δ Tn6736	
		<i>tetA(A)</i>	Tetracycline resistance	38236..39435		
		Type A <i>ars</i> locus	Arsenic resistance	69525..74258		
		<i>sil</i>	Silver resistance	16867..19162		<i>sil-cop</i> region
		<i>cop</i>	Copper resistance	99941..110096		
	pW08291-tetA	<i>sil</i>	<i>sil</i>	Silver resistance	18062..30513	<i>sil-cop</i> region
			<i>cop</i>	Copper resistance	31810..39340	
			Type A <i>ars</i> locus	Arsenic resistance	55128..59862	
		<i>tetA(A)</i>	Tetracycline resistance	89487..90686	ARR _{pW08291-tetA}	
		<i>dfrA1</i>	Trimethoprim resistance	91919..92392		
		<i>qacED1</i>	Quaternary ammonium compound resistance	93096..93443		
		<i>sulI</i>	Sulphonamide resistance	93437..94276		
		<i>mph(A)</i>	Macrolide resistance	98487..99392		
		<i>bla_{SHV-12}</i>	β -lactam resistance	102909..103769		
	pA2508-emrE	<i>emrE</i>	Quaternary ammonium compound resistance	140434..140766	ARR _{pA2508-emrE} (Δ Tn6535)	
		Type E <i>ars</i> locus	Arsenic resistance	147522..150841		
	pL21-1NR	<i>cop</i>	Copper resistance	33412..36192	<i>sil-cop</i> region	
		<i>sil</i>	Silver resistance	45370..57816		
		Type A <i>ars</i> locus	Arsenic resistance	106416..111159	Tn6736	
		Type B <i>ars</i> locus	Arsenic resistance	118041..122346	Type B <i>ars</i> locus	
pSC138	<i>tetA(A)</i>	Tetracycline resistance	23877..25076	ARR-1 _{pSC138}		
	<i>catA2</i>	Phenicol resistance	31377..32018			

		<i>bla</i> _{TEM-1}	β-lactam resistance	36180..37041	
		<i>aphA1</i>	Aminoglycoside resistance	42500..43261	
		<i>dfrA12</i>	Trimethoprim resistance	45941..46438	
		<i>aadA2</i>	Aminoglycoside resistance	46858..47637 63491..64270	
		<i>qacED1</i>	Quaternary ammonium compound resistance	47801..48148	
		<i>sul1</i>	Sulphonamide resistance	48142..48981	
		<i>sul3</i>	Sulphonamide resistance	58613..59404	
		<i>qacH2</i>	Quaternary ammonium compound resistance	60584..60916	
		<i>aadA1a</i>	Aminoglycoside resistance	61086..61877	
		<i>cmlA1</i>	Phenicol resistance	61970..63229	
		<i>bla</i> _{CMY-2}	β-lactam resistance	91413..92558	
<i>sugE</i>	Quaternary ammonium compound resistance	93182..93662			
IncFIB-4.2	p10057-catA	<i>dfrA12</i>	Trimethoprim resistance	111171..111668	ARR _{p10057-catA}
		<i>qacED1</i>	Quaternary ammonium compound resistance	114369..114716 171860..172207	
		<i>sul1</i>	Sulphonamide resistance	114710..115549 142113..142952 172201..173040	
		<i>chrA</i>	Chromate resistance	117363..118568	
		<i>mph(A)</i>	Macrolide resistance	122187..123092	
		<i>bla</i> _{SHV-12}	β-lactam resistance	124055..124915	
		<i>mph(E)</i>	Macrolide resistance	133281..134165	

		<i>msr(E)</i>	Macrolide, Lincosamide and Streptogramin B resistance	134221..135696	
		<i>armA</i>	Aminoglycoside resistance	137995..138768	
		<i>bla_{DHA-1}</i>	β -lactam resistance	144529..145668	
		<i>qnrB4</i>	Quinolone resistance	149789..150436	
		<i>catA1</i>	Phenicol resistance	161047..161706 193016..193675	
		<i>aacA4cr</i>	Aminoglycoside resistance	168770..169369	
		<i>bla_{OXA-1}</i>	β -lactam resistance	169500..170330	
		<i>catB3</i>	Phenicol resistance	170468..171100	
		<i>arr3</i>	Rifampin resistance	171185..171637	
		Type E <i>ars</i> locus	Arsenic resistance	176865..180184	
		<i>tetA(D)</i>	Tetracycline resistance	190157..191341	
		<i>strA</i>	Aminoglycoside resistance	196060..196863	
		<i>strB</i>	Aminoglycoside resistance	196869..197699	
		<i>sul2</i>	Sulphonamide resistance	202363..203178	
	p13294-1NR	Type C <i>ars</i> locus	Arsenic resistance	67507..71815	Type C <i>ars</i> locus
		<i>sil</i>	Silver resistance	75572.. 88023	<i>sil-cop</i> region
		<i>cop</i>	Copper resistance	89321..96862	
	pA1876-NR	<i>sil</i>	Silver resistance	42634..55085	<i>sil-cop</i> region
		<i>cop</i>	Copper resistance	56383..59779	
	pA2359-IMP	<i>mer</i> locus	Mercuric resistance	4732..8235	ARR _{pA2359-IMP} (Tn6382)
		<i>bla_{TEM-1}</i>	β -lactam resistance	12141..13001	
		<i>bla_{CTX-M-3}</i>	β -lactam resistance	13783..14658	
		<i>aacA4</i>	Aminoglycoside resistance	16727..17281	

		<i>qacED1</i>	Quaternary ammonium compound resistance	17408..17740	
		<i>bla_{IMP-38}</i>	β-lactam resistance	17972..18712	
	pFB2.3	Type C <i>ars</i> locus	Arsenic resistance	33901..38209	Type C <i>ars</i> locus
		<i>sil</i>	Silver resistance	43981..66193	<i>sil-cop</i> region
		<i>cop</i>	Copper resistance	67491..70746	
		Type D <i>ars</i> locus	Arsenic resistance	109803..112679	Type D <i>ars</i> locus

Table S6. Pairwise comparison of backbone sequences of the 11 IncFIB single-replicon plasmids using BLASTN

(coverage+identity), %	pBJ20-tetA	p71221-mphA	pW08291-tetA	pA2508-emrE	pL21-1NR	pSC138	p10057-catA	p13294-1NR	pA1876-NR	pA2359-IMP	pFB2.3
pBJ20-tetA		(100+100)	(94+100)	(72+96)	(89+97)	(89+97)	(75+89)	(75+89)	(75+89)	(84+89)	(86+89)
p71221-mphA	(100+100)		(100+100)	(78+97)	(89+97)	(89+97)	(75+89)	(75+89)	(75+89)	(84+89)	(86+89)
pW08291-tetA	(100+100)	(100+100)		(78+97)	(89+97)	(89+97)	(75+89)	(75+89)	(75+89)	(84+89)	(86+89)
pA2508-emrE	(64+96)	(64+96)	(66+97)		(100+98)	(100+97)	(80+89)	(80+89)	(79+89)	(89+89)	(92+89)
pL21-1NR	(27+97)	(27+97)	(26+97)	(35+98)		(100+100)	(68+90)	(67+90)	(66+90)	(75+90)	(79+90)
pSC138	(27+97)	(27+97)	(25+97)	(35+97)	(98+100)		(68+90)	(67+90)	(66+90)	(75+90)	(79+90)
p10057-catA	(26+89)	(26+89)	(24+89)	(32+89)	(76+90)	(77+90)		(100+99)	(100+99)	(100+99)	(99+99)
p13294-1NR	(26+89)	(26+89)	(24+89)	(32+89)	(75+90)	(76+90)	(100+99)		(100+100)	(100+99)	(99+99)
pA1876-NR	(26+89)	(26+89)	(24+89)	(32+89)	(75+90)	(76+90)	(100+99)	(100+100)		(100+99)	(99+99)
pA2359-IMP	(26+89)	(26+89)	(24+89)	(32+89)	(75+90)	(76+90)	(89+99)	(89+99)	(88+99)		(100+99)
pFB2.3	(26+89)	(26+89)	(24+89)	(32+89)	(76+90)	(77+90)	(89+99)	(84+99)	(84+99)	(94+99)	