

Colistin

	<i>lpxA</i>	<i>lpxC</i>	<i>lpxD</i>	<i>pmrA</i>	<i>pmrB</i>	Total
in/del	4 (3)	13 (11)	1 (1)	0	0	18 (15)
Substitution	13 (6)	12 (5)	4 (2)	0	0	29 (13)
ISAb_{a11}	4 (2)	11 (7)	9 (6)	0	0	24 (15)
Total	21 (11)	36 (22)	14 (9)	0	0	71 (43)

Colistin+Meropenem

	<i>lpxA</i> *	<i>lpxC</i> *	<i>lpxD</i> *	<i>pmrA</i>	<i>pmrB</i>	Total
in/del	0	0	0	0	1	0
Substitution	0	0	0	12 (4)	28 (19)	41 (23)
ISAb_{a11}	0	0	0	0	0	0
Total	0	0	0	12 (4)	29 (19)	41 (23)

The numerical value is the number of isolated strains, and (numbers) are the number of independent events.

* 21 of 41 strains were analyzed.

Supplemental
Table 2
Kamoshida et al.

ATCC 19606 Colistin-resistant strains

Name	Colony	Genes					Amino acid change	Mutation gene	
		<i>lpxA</i>	<i>lpxC</i>	<i>lpxD</i>	<i>pmrA</i>	<i>pmrB</i>			
KL001	1	591_592delTA	-	-	-	-	-	I198fs(I198*)	<i>lpxA</i>
KL002	1	591_592delTA	-	-	-	-	-	I198fs(I198*)	<i>lpxA</i>
KL003	1	-	-	-	-22bp>ISAbA11(AAG^GTT)	-	-	-	<i>lpxD</i>
KL004	2	-	394>ISAbA11(Inversion)	-	-	-	-	L132fs(L132*)	<i>lpxC</i>
KL005	3	82delT	-	-	-	-	-	I28fs(I28Y)V35*	<i>lpxA</i>
KL006	3	-	-	-	-	-	-	-	Not detected
KL007	3	-	-	-	-	-	-	-	Not detected
KL008	3	-	630delIT	-	-	-	-	L211fs(L211*)	<i>lpxC</i>
KL009	3	461G>A	-	-	-	-	-	G154D	<i>lpxA</i>
KL010	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL011	3	-	-	-	-	-	-	-	Not detected
KL012	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL013	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL014	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL015	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL016	3	461G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL017	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL018	3	562G>A	-	-	-	-	-	G188S	<i>lpxA</i>
KL019	4	-	119G>C	-	-	-	-	R40P	<i>lpxC</i>
KL020	5	-	-	-	-	-	-	-	Not detected
KL021	5	-	327_330insATTT	-	-	-	-	L114fs(L114F)Q122*	<i>lpxC</i>
KL022	5	315G>A	-	-	-	-	-	M117I	<i>lpxA</i>
KL023	5	-	563C>T	-	-	-	-	A188V	<i>lpxC</i>
KL024	5	-	394>ISAbA11(Inversion)	-	-	-	-	L132*	<i>lpxC</i>
KL025	5	-	563C>T	-	-	-	-	A188V	<i>lpxC</i>
KL026	5	-	563C>T	-	-	-	-	A188V	<i>lpxC</i>
KL027	5	-	563C>T	-	-	-	-	A188V	<i>lpxC</i>
KL028	5	-	563C>T	-	-	-	-	A188V	<i>lpxC</i>
KL029	5	-	563C>T	-	-	-	-	A188V	<i>lpxC</i>
KL030	6	-	97_98delGT	-	-	-	-	V33fs(V33G)A52*	<i>lpxC</i>
KL031	7	-	569C>T	-	-	-	-	T190I	<i>lpxC</i>
KL032	7	-	-	-	233>ISAbA11	-	-	I78fs(I78G)P83*	<i>lpxD</i>
KL033	8	-	391>ISAbA11(Inversion)	-	-	-	-	I131fs(I131*)	<i>lpxC</i>
KL034	8	-	391>ISAbA11(Inversion)	-	-	-	-	I131fs(I131*)	<i>lpxC</i>
KL035	8	-	391>ISAbA11(Inversion)	-	-	-	-	I131fs(I131*)	<i>lpxC</i>
KL036	8	-	391>ISAbA11(Inversion)	-	-	-	-	I131fs(I131*)	<i>lpxC</i>
KL037	9	-	475_689(215bp)del	-	-	-	-	D159fs(D159C)D161*	<i>lpxC</i>
KL038	9	469G>A	-	-	-	-	-	G157R	<i>lpxA</i>
KL039	9	-	-	-	-	-	-	-	Not detected
KL040	9	-	429delA	-	-	-	-	A144fs(A144Q)M194*	<i>lpxC</i>
KL041	9	-	-	-	749C>T	-	-	T250I	<i>lpxD</i>
KL042	10	-	327_330delATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL043	10	263>ISAbA11(Inversion)	-	-	-	-	-	N88fs(N88)S96*	<i>lpxA</i>
KL044	10	-	327_330delATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL045	10	-	-	-	-3bp>ISAbA11(Inversion)(AAa^tta)	-	-	-	<i>lpxD</i>
KL046	10	-	327_330delATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL047	11	-	327_330delATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL048	11	413>ISAbA11	-	-	-	-	-	V140fs(V140L)H143*	<i>lpxA</i>
KL049	11	413>ISAbA11	-	-	-	-	-	V140fs(V140L)H143*	<i>lpxA</i>
KL050	11	-	394>ISAbA11(Inversion)	-	-	-	-	L132fs(L132*)	<i>lpxC</i>
KL051	11	413>ISAbA11	-	-	-	-	-	V140fs(V140L)H143*	<i>lpxA</i>
KL052	11	-	-	-	271A>C	-	-	T91P	<i>lpxD</i>
KL053	11	-	-	-	271A>C	-	-	T91P	<i>lpxD</i>
KL054	11	-	-	-	271A>C	-	-	T91P	<i>lpxD</i>
KL055	11	-	-	-	218insA	-	-	D75fs(D75R)N76*	<i>lpxD</i>
KL056	12	-	-	-	-	-	-	-	Not detected
KL057	12	-	-	-	-	-	-	-	Not detected
KL058	12	306_310delGCAA	-	-	-	-	-	Q103fs(Q103)A106*	<i>lpxA</i>
KL059	12	-	-	-	232>ISAbA11(Inversion)	-	-	I78fs(I78*)	<i>lpxD</i>
KL060	12	-	-	-	232>ISAbA11(Inversion)	-	-	I78fs(I78*)	<i>lpxD</i>
KL061	13	-	327_330insATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL062	13	-	392>ISAbA11	-	-	-	-	L132fs(L132G)E136*	<i>lpxC</i>
KL063	13	-	703G>T	-	-	-	-	V235F	<i>lpxC</i>
KL064	13	-	703G>T	-	-	-	-	V235F	<i>lpxC</i>
KL065	13	-	811>ISAbA11	-	-	-	-	L271fs(L271*)	<i>lpxC</i>
KL066	13	-	703G>T	-	-	-	-	V235F	<i>lpxC</i>
KL067	13	-	-	-	-	-	-	-	Not detected
KL068	13	-	-35bpA>G	-	-	-	-	-	<i>lpxC</i>
KL069	13	-	811>ISAbA11	-	-	-	-	L271fs(L271*)	<i>lpxC</i>
KL070	13	-	-	-	-2bp>ISAbA11(Inversion)(Aat^taA)	-	-	-	<i>lpxD</i>
KL071	14	-	327_330insATTT	-	-	-	-	L114fs(L114F)Q122*	<i>lpxC</i>
KL072	14	-	327_330delATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL073	15	-	327_330delATTT	-	-	-	-	Y112fs(Y112C)F128*	<i>lpxC</i>
KL074	15	-	-	-	-	-	-	-	Not detected
KL075	15	-	-	-	-	-	-	-	Not detected
KL076	15	604C>T, 606A>T	-	-	-	-	-	R202C	<i>lpxA</i>
KL077	15	-	-	-	-	-	-	-	Not detected
KL078	15	-	-	-	-	-	-	-	Not detected
KL079	15	-	-	-	-	-	-	-	Not detected
KL080	15	-	-	-	-	-	-	-	Not detected
KL081	15	604C>T	-	-	-	-	-	R202*	<i>lpxA</i>
KL082	15	-	394>ISAbA11	-	-	-	-	L132fs(L132*)	<i>lpxC</i>
KL083	16	-	-	-	-22bp>ISAbA11(AAG^GTT)	-	-	-	<i>lpxD</i>
KL084	16	-	-	-	-22bp>ISAbA11(AAG^GTT)	-	-	-	<i>lpxD</i>
KL085	16	-	-	-	-22bp>ISAbA11(AAG^GTT)	-	-	-	<i>lpxD</i>

Mutation gene	Name	Mutation	Colistin MIC (μg/ml)
<i>lpxA</i>	KL001	591_592delTA: I198fs	128
<i>lpxA</i>	KL009	461G>A: G154D	128
<i>lpxA</i>	KL010	562G>A: G188S	128
<i>lpxA</i>	KL022	315G>A: M117I	256
<i>lpxA</i>	KL038	469G>A: G157R	128
<i>lpxA</i>	KL076	604C>T, 606A>T: R202C	128
<i>lpxC</i>	KL037	475_689(215)del: D159fs	64
<i>lpxC</i>	KL019	119G>C: R40P	128
<i>lpxC</i>	KL023	563C>T: A188V	256
<i>lpxC</i>	KL031	569C>T: T190I	128
<i>lpxC</i>	KL063	703G>T: V235F	256
<i>lpxD</i>	KL055	218insA: D75fs	64
<i>lpxD</i>	KL041	749C>T: T250I	128
<i>lpxD</i>	KL052	271A>C: T91P	8

NCBI BioSample

BioSample ID	Amino acids					Colistin MIC	Mutation
	LpxA	LpxC	LpxD	PmrA	PmrB		
12087735	-	-	-	-	A138T, R263H	>256	PmrB
4901700	-	-	-	K172I	-	8	PmrA
4901699	-	-	-	K172I	-	8	PmrA
4901698	-	-	-	-	P170S	8	PmrB
4901697	-	-	-	-	P170L	>8	PmrB
4901694	-	-	-	-	-	4	Not detected
4901693	-	-	-	-	H266Y, Q270P	>8	PmrB
4901678	-	-	-	-	T235I	>8	PmrB
6837835	-	-	-	D10E	V133G, P154T	>4	PmrAB
6837830	-	-	-	-	L33P	>4	PmrB
6837819	-	-	-	-	20bp>ISAba125(insertion)	>4	PmrB
6837812	-	-	-	-	-	>4	Not detected
6837767	-	-	-	-	L239I	>4	PmrB
6837762	-	-	-	-	-	>4	Not detected
6837757	-	-	-	-	-	>4	Not detected
6837753	-	-	D75G	-	-	4	LpxD
6837751	-	-	-	M6K	-	>4	PmrB
6827875	-	-	-	I173F	-	>4	PmrB
6892294	-	-	S100T	-	-	>4	LpxD
6892290	-	-	-	-	P170L, N337H	>4	PmrB
6892289	-	-	-	I173F	-	>4	PmrA
4254730	-	-	-	E8D	Y116H	>256	PmrAB
4254728	-	-	-	-	S17R	192	PmrB
4254727	-	-	-	-	T232I	128	PmrB

ATCC 19606 Colistin-meropenem-resistant strains

Name	Colony	Genes					Amino acid change	Mutation gene	
		<i>lpxA</i>	<i>lpxC</i>	<i>lpxD</i>	<i>pmrA</i>	<i>pmrB</i>			
CM001	1	-	-	-	-	-	695C>T	T232I	<i>pmrB</i>
CM002	1	-	-	-	-	-	695C>T	T232I	<i>pmrB</i>
CM003	2	-	-	-	-	-	692G>T	R231L	<i>pmrB</i>
CM004	2	-	-	-	-	-	692G>T	R231L	<i>pmrB</i>
CM005	2	-	-	-	-	-	692G>T	R231L	<i>pmrB</i>
CM006	2	-	-	-	-	-	692G>T	R231L	<i>pmrB</i>
CM008	2	-	-	-	-	-	692G>T	R231L	<i>pmrB</i>
CM011	3	-	-	-	-	-	680C>T	A227V	<i>pmrB</i>
CM012	3	-	-	-	-	-	697C>T	P233S	<i>pmrB</i>
CM015	3	-	-	-	-	-	680C>T	A227V	<i>pmrB</i>
CM016	3	-	-	-	-	-	680C>T	A227V	<i>pmrB</i>
CM017	3	-	-	-	-	-	680C>T	A227V	<i>pmrB</i>
CM018	4	-	-	-	-	-	787C>G	R263G	<i>pmrB</i>
CM019	5	-	-	-	-	-	794A>C	Q265P	<i>pmrB</i>
CM020	6	-	-	-	-	-	697C>T	P233S	<i>pmrB</i>
CM021	7	-	-	-	-	-	787C>T	R263C	<i>pmrB</i>
CM022	7	-	-	-	36G>T	-	-	M12I	<i>pmrA</i>
CM023	7	-	-	-	36G>T	-	-	M12I	<i>pmrA</i>
CM024	8	-	-	-	-	42(AATTTTCAGTGTCAT CTTAGGTTGTATTTT)71 duplication	28-37 position insertion +VILGCILIFS	-	<i>pmrB</i>
CM025	9	-	-	-	-	-	937G>T	D313Y	<i>pmrB</i>
CM026	9	-	-	-	-	-	937G>C	D313H	<i>pmrB</i>
CM027	10	N.T.	N.T.	N.T.	-	-	794A>C	Q265P	<i>pmrB</i>
CM028	11	N.T.	N.T.	N.T.	36G>T	-	-	M12I	<i>pmrA</i>
CM029	11	N.T.	N.T.	N.T.	-	-	680C>T	A227V	<i>pmrB</i>
CM031	12	N.T.	N.T.	N.T.	-	-	944G>A	G315D	<i>pmrB</i>
CM032	12	N.T.	N.T.	N.T.	-	-	944G>A	G315D	<i>pmrB</i>
CM033	12	N.T.	N.T.	N.T.	-	-	680C>T	A227V	<i>pmrB</i>
CM034	12	N.T.	N.T.	N.T.	-	-	704C>T	T235I	<i>pmrB</i>
CM035	13	N.T.	N.T.	N.T.	-	-	788G>A	R263H	<i>pmrB</i>
CM036	13	N.T.	N.T.	N.T.	-	-	788G>A	R263H	<i>pmrB</i>
CM038	14	N.T.	N.T.	N.T.	-	-	697C>T	P233S	<i>pmrB</i>
CM041	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM042	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM043	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM044	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM045	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM046	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM047	15	N.T.	N.T.	N.T.	-	-	787C>G	R263G	<i>pmrB</i>
CM048	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM049	15	N.T.	N.T.	N.T.	34A>G	-	-	M12V	<i>pmrA</i>
CM051	16	N.T.	N.T.	N.T.	38G>T	-	-	I13S	<i>pmrA</i>

N.T. Not Tested

ATCC 19606 Colistin-ciprofloxacin-resistant strains

Name	Colony			Amino acid change	Mutation gene
		<i>pmrA</i>	<i>pmrB</i>		
CpCL001	1	-	689C>T	A226V	<i>pmrB</i>
CpCL002	1	-	787C>T	R263C	<i>pmrB</i>
CpCL003	1	-	787C>T	R263C	<i>pmrB</i>
CpCL004	1	-	787C>T	R263C	<i>pmrB</i>
CpCL005	2	239C>T	-	A80V	<i>pmrA</i>
CpCL006	2	-	821T>G	L274W	<i>pmrB</i>
CpCL007	3	-	794A>C	Q265P	<i>pmrB</i>
CpCL008	3	-	944G>C	G315D	<i>pmrB</i>
CpCL009	4	-	697C>T	P233S	<i>pmrB</i>
CpCL010	4	-	49A>C	S17R	<i>pmrB</i>
CpCL011	5	-	676G>A	A226T	<i>pmrB</i>
CpCL012	5	-	676G>A	A226T	<i>pmrB</i>
CpCL013	6	-	680C>T	A227V	<i>pmrB</i>
CpCL014	6	-	692G>A	R231Q	<i>pmrB</i>
CpCL015	6	-	716T>C	L239S	<i>pmrB</i>
CpCL016	6	-	716T>C	L239S	<i>pmrB</i>
CpCL017	6	-	716T>C	L239S	<i>pmrB</i>

ATCC BAA-1605 Colistin-resistant strains

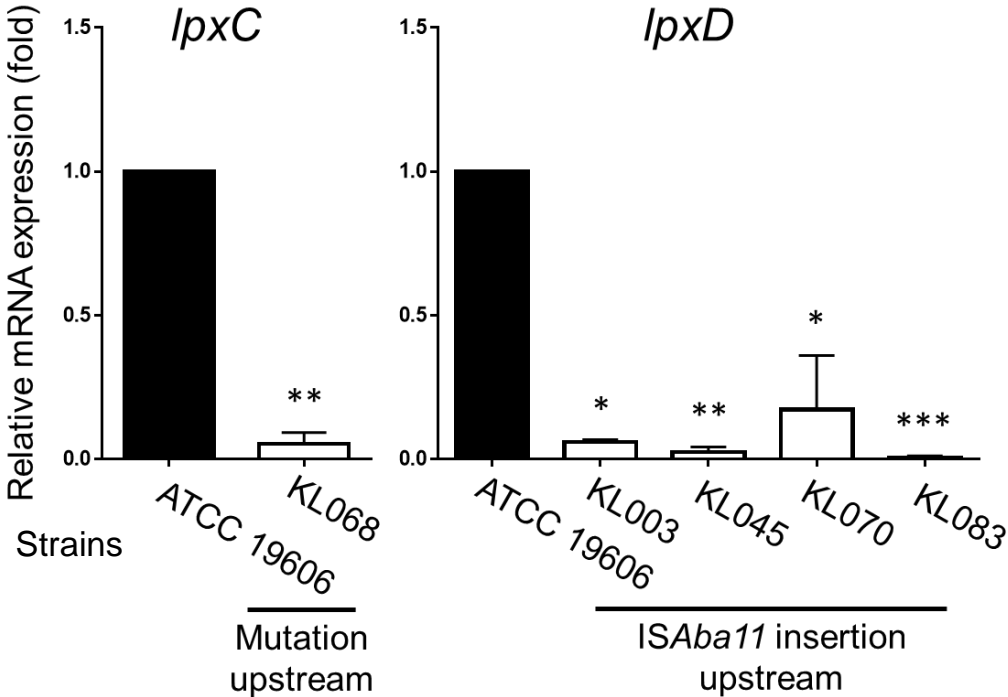
Name	Colony	Genes		Amino acid change	Mutation gene
		<i>pmrA</i>	<i>pmrB</i>		
BAAC001	1	60G>C	-	L20F	<i>pmrA</i>
BAAC002	1	60G>T	-	L20F	<i>pmrA</i>
BAAC003	1	60G>T	-	L20F	<i>pmrA</i>
BAAC009	2	-	704C>T	T235I	<i>pmrB</i>
BAAC010	2	-	704C>T	T235I	<i>pmrB</i>
BAAC033	6	-	707C>A	T235I	<i>pmrB</i>
BAAC044	7	-	697C>T	P233S	<i>pmrB</i>
BAAC045	7	-	686A>C	E229A	<i>pmrB</i>
BAAC046	7	-	944G>T	G315V	<i>pmrB</i>
BAAC066	10	-	944G>A	G315D	<i>pmrB</i>
BAAC067	10	-	944G>A	G315D	<i>pmrB</i>

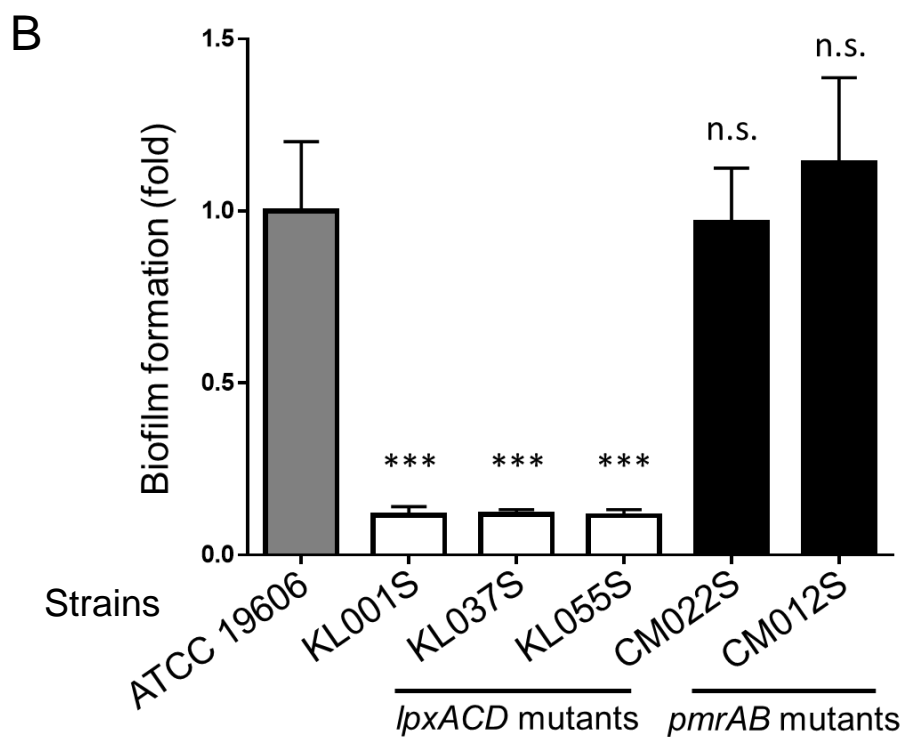
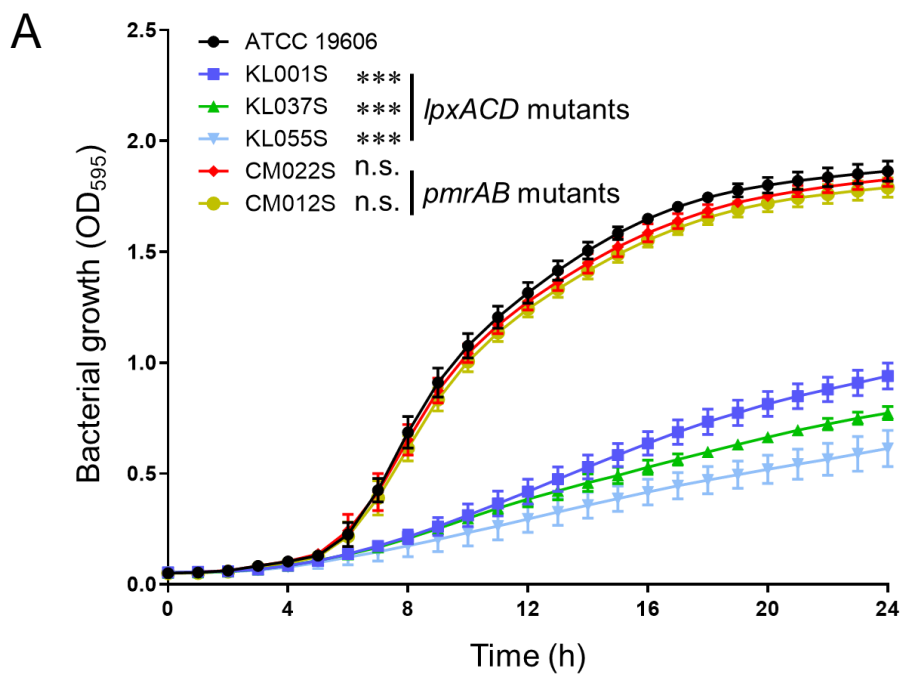
ATCC BAA-1605 Colistin-meropenem-resistant strains

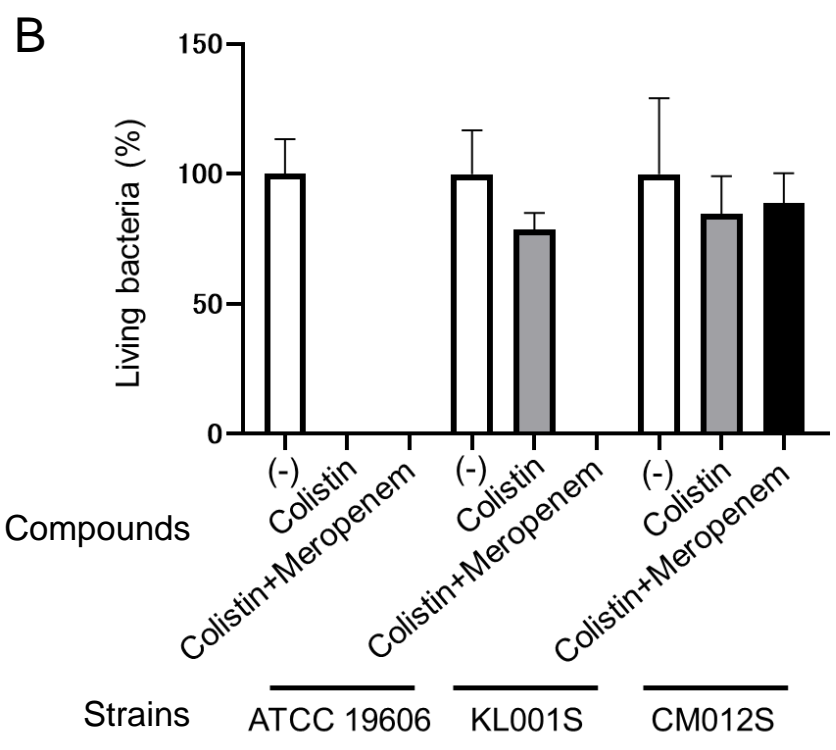
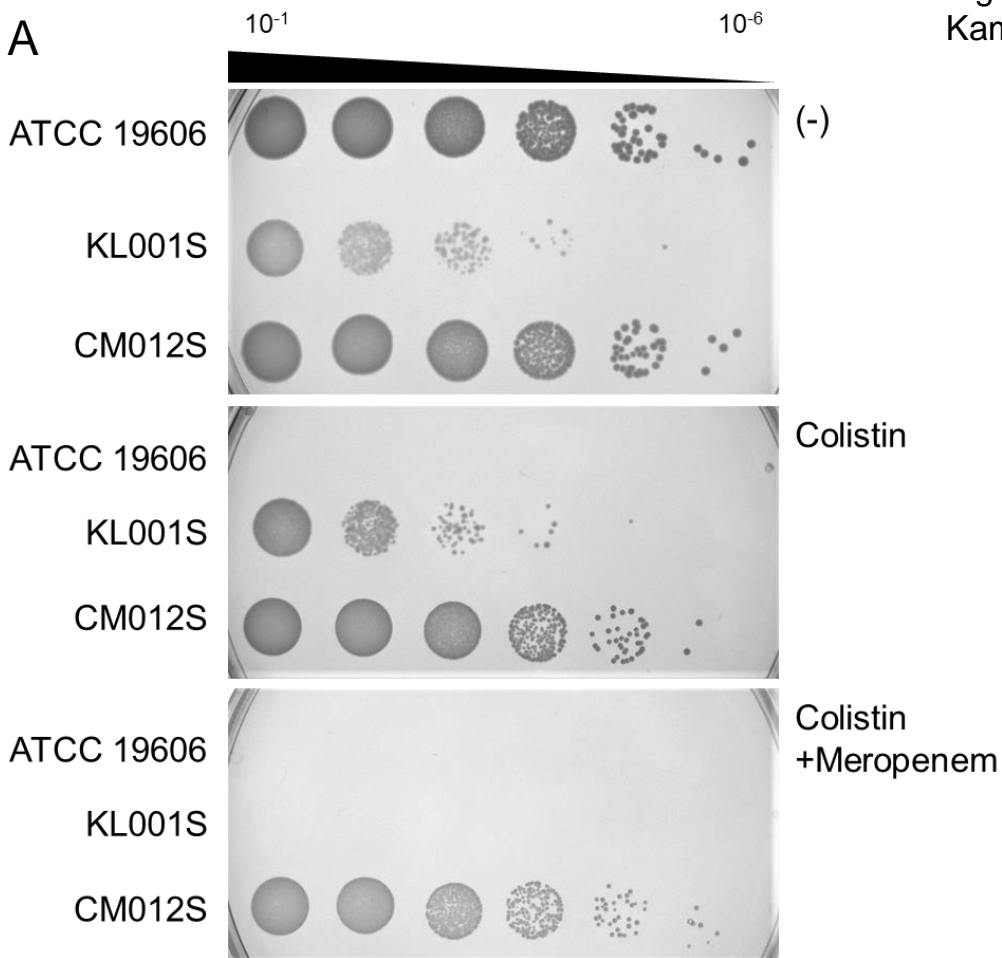
Name	Colony	Genes		Amino acid change	Mutation gene
		<i>pmrA</i>	<i>pmrB</i>		
BAACM001	1	60G>C	-	L20F	<i>pmrA</i>
BAACM002	1	60G>T	-	L20F	<i>pmrA</i>
BAACM003	1	60G>T	-	L20F	<i>pmrA</i>
BAACM004	1	60G>C	-	L20F	<i>pmrA</i>
BAACM005	1	60G>T	-	L20F	<i>pmrA</i>
BAACM006	1	60G>T	-	L20F	<i>pmrA</i>
BAACM007	1	-	704C>T	T235I	<i>pmrB</i>
BAACM008	1	60G>C	-	L20F	<i>pmrA</i>
BAACM009	1	60G>C	-	L20F	<i>pmrA</i>
BAACM010	1	60G>T	-	L20F	<i>pmrA</i>
BAACM011	1	60G>T	-	L20F	<i>pmrA</i>
BAACM012	4	-	697C>T	P233S	<i>pmrB</i>
BAACM013	5	-	938A>T	D313V	<i>pmrB</i>
BAACM014	5	60G>C	-	L20F	<i>pmrA</i>
BAACM015	6	60G>C	-	L20F	<i>pmrA</i>
BAACM016	6	60G>C	-	L20F	<i>pmrA</i>
BAACM017	7	-	944G>T	G315V	<i>pmrB</i>
BAACM018	7	-	787C>G	R263G	<i>pmrB</i>
BAACM019	7	60G>C	-	L20F	<i>pmrA</i>
BAACM020	7	60G>C	-	L20F	<i>pmrA</i>
BAACM021	7	-	699A>C	E229D	<i>pmrB</i>
BAACM022	7	-	699A>C	E229D	<i>pmrB</i>
BAACM023	8	-	698A>C	P233H	<i>pmrB</i>
BAACM024	8	-	788G>A	R263H	<i>pmrB</i>
BAACM025	8	-	698A>C	P233H	<i>pmrB</i>
BAACM026	9	-	787C>G	R263G	<i>pmrB</i>
BAACM027	10	-	788G>A	R263H	<i>pmrB</i>

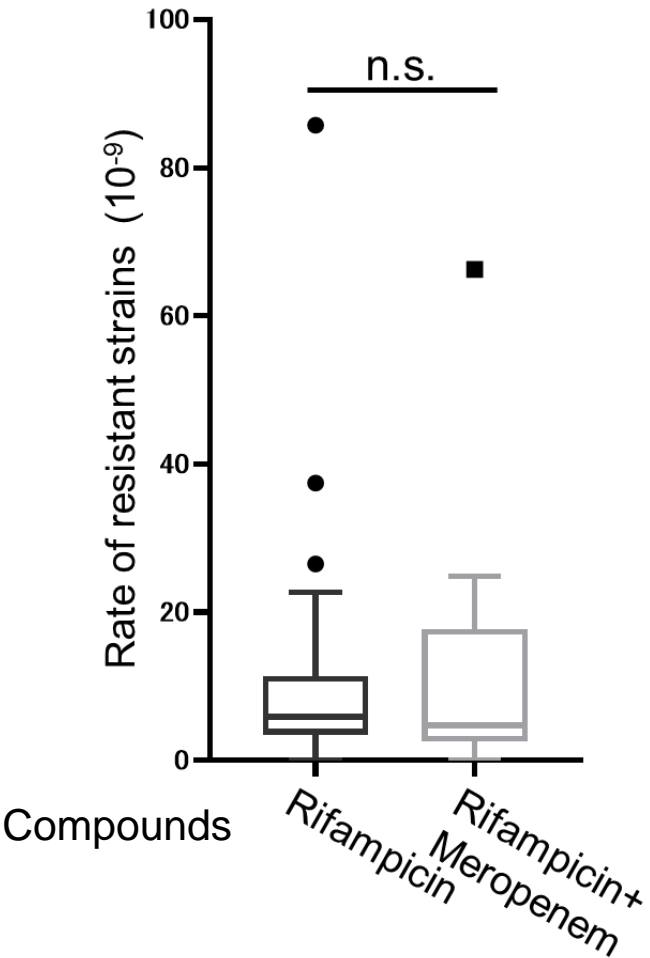
IS insertion in ATCC BAA-1605 Colistin-resistant strains

Name	Colony	Genes			Remark
		<i>lpxA</i>	<i>lpxC</i>	<i>lpxD</i>	
BAAC001	1	-	-	-	<i>pmrA</i> mutation
BAAC002	1	-	-	-	<i>pmrA</i> mutation
BAAC003	1	-	-	-	<i>pmrA</i> mutation
BAAC004	1	-	-	○	-
BAAC005	1	-	○	-	-
BAAC006	1	-	○	-	-
BAAC007	1	-	○	-	-
BAAC008	1	-	-	-	<i>pmrB</i> mutation
BAAC009	2	-	-	-	<i>pmrB</i> mutation
BAAC010	2	-	-	-	-
BAAC011	2	-	-	-	-
BAAC012	2	-	○	-	-
BAAC013	2	-	○	-	-
BAAC014	2	-	-	-	-
BAAC015	2	○	-	-	-
BAAC016	2	-	○	-	-
BAAC017	3	-	-	-	-
BAAC018	3	-	-	-	-
BAAC019	3	-	○	-	-
BAAC020	3	-	○	-	-
BAAC021	4	-	○	-	-
BAAC022	4	-	○	-	-
BAAC023	4	-	○	-	-
BAAC024	4	-	-	-	-
BAAC025	5	-	○	-	-
BAAC026	5	-	-	-	-
BAAC027	5	-	-	-	-
BAAC028	5	-	○	-	-
BAAC029	5	-	-	-	-
BAAC030	5	-	-	-	-
BAAC031	5	-	○	-	-
BAAC032	5	-	-	-	-
BAAC033	6	-	-	-	<i>pmrB</i> mutation
BAAC034	6	-	○	-	-
BAAC035	6	-	-	-	-
BAAC036	6	-	○	-	-
BAAC037	6	-	○	-	-
BAAC038	6	-	-	-	-
BAAC039	6	-	○	-	-
BAAC040	6	-	-	-	-
BAAC041	6	-	-	-	-
BAAC042	6	-	-	-	-
BAAC043	6	-	○	-	-
BAAC044	7	-	-	-	<i>pmrB</i> mutation
BAAC045	7	-	-	-	<i>pmrB</i> mutation
BAAC046	7	-	-	-	<i>pmrB</i> mutation
BAAC047	7	-	-	-	-
BAAC048	7	-	-	-	-
BAAC049	7	-	-	-	-
BAAC050	7	-	-	-	-
BAAC051	7	-	-	-	-
BAAC052	7	-	-	-	-
BAAC053	7	-	-	-	-
BAAC054	7	-	○	-	-
BAAC055	7	-	○	-	-
BAAC056	7	-	-	○	-
BAAC057	7	○	-	-	-
BAAC058	8	-	-	-	-
BAAC059	8	-	○	-	-
BAAC060	9	-	○	-	-
BAAC061	9	-	-	○	-
BAAC062	9	-	○	-	-
BAAC063	9	-	-	-	-
BAAC064	9	-	-	-	-
BAAC065	9	-	-	-	-
BAAC066	10	-	-	-	<i>pmrB</i> mutation
BAAC067	10	-	-	-	<i>pmrB</i> mutation
BAAC068	10	-	○	-	-
BAAC069	10	-	○	-	-
BAAC070	10	-	○	-	-
BAAC071	10	-	○	-	-









- 1 **Supplemental TABLE 1** Types of mutations in colistin-resistant strains of *A. baumannii*
2 ATCC 19606.
- 3 **Supplemental TABLE 2** List of mutations in colistin-resistant strains of *A. baumannii*
4 ATCC 19606.
- 5 **Supplemental TABLE 3** Minimum inhibitory concentrations (MICs) of colistin in
6 representative *A. baumannii* strains with amino acid substitutions and frameshift
7 mutations in LpxACD.
- 8 **Supplemental TABLE 4** List of mutations and minimum inhibitory concentrations
9 (MICs) of colistin in *A. baumannii* strains (NCBI BioSample).
- 10 **Supplemental TABLE 5** List of mutations in colistin-meropenem-resistant strains of *A.*
11 *baumannii* ATCC 19606.
- 12 **Supplemental TABLE 6** List of mutations in colistin-ciprofloxacin-resistant strains of *A.*
13 *baumannii* ATCC 19606.
- 14 **Supplemental TABLE 7** List of mutations in colistin-resistant and colistin-meropenem-
15 resistant strains of *A. baumannii* ATCC BAA-1605.
- 16 **Supplemental TABLE 8** Insertion sequences (ISs) in colistin-resistant strains of *A.*
17 *baumannii* ATCC BAA-1605.
- 18

19 **Supplemental FIGURE LEGENDS**

20 **Supplemental FIG 1** Expression of *lpxCD* mRNA in colistin-resistant strains with
21 upstream mutations (*lpxC*: KL068; *lpxD*: KL003, KL045, KL070, KL083; and wild-type:
22 ATCC 19606) was analyzed using quantitative reverse transcription-PCR (qRT-PCR). *A.*
23 *baumannii* was grown in LB broth at 37 °C with shaking until OD₆₀₀ reached 0.75. Total
24 RNA was extracted and reverse-transcribed; RT-qPCR was performed using the
25 intercalator method (TB Green). Data are presented as the mean ± SD ($n = 3$ per group).
26 Comparison using one-way ANOVA. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

27

28 **Supplemental FIG 2** Growth and biofilm formation of colistin-resistant *A. baumannii*
29 strains. (A) ATCC 19606 (wild-type strain) and representative strains with initial OD₆₀₀
30 0.001 were grown in LB broth at 37 °C for 24 h. Absorbance at 595 nm was measured at
31 the indicated time points. Data are presented as the mean ± SD; $n = 3$ per group compared
32 by two-way ANOVA. n.s., not significant, *** $p < 0.001$. (B) The biofilm formation ability
33 of the representative strains was analyzed by the crystal violet staining method. Data are
34 presented as the mean ± SD; $n = 3$ per group. Compared by one-way ANOVA. n.s., not
35 significant, *** $p < 0.001$.

36

37 **Supplemental FIG 3** Bactericidal activity of antibiotics against LPS-modified and LPS-
38 deficient strains of *A.baumannii* ATCC 19606. (A) Representative images of KL001S and
39 CM012S, LPS-deficient and LPS-modified strains, respectively, and ATCC 19606 as the
40 wild-type strain spotted on each plate. The culture (OD₆₀₀ 1.0) was serially diluted (10⁻¹
41 to 10⁻⁶) and 10 μL of each dilution was spotted onto the plates. The upper part of the plate
42 does not contain any antibiotics, the middle part contains 5× MIC (10 μg/mL) of colistin,
43 and the lower part contains 10 μg/mL of colistin and 1/5× MIC (0.1 μg/mL) of
44 meropenem. (B) The CFU obtained on the non-antibiotic plates was used to calculate the
45 percentage of surviving bacteria. Data are presented as the mean ± SD (*n* = 3 per group).

46

47 **Supplemental FIG 4** Frequency of resistance to rifampicin alone or in combination with
48 1/5× MIC (0.1 μg/mL) of meropenem. The culture (0.1 mL of *A. baumannii* ATCC 19606
49 overnight culture) was plated on LB agar containing 5× MIC (10 μg/mL) of rifampicin
50 with or without 0.1 μg/mL of meropenem. Data are shown as box plots; *n* = 20
51 independent assays compared by the Mann–Whitney *U*-test. n.s., not significant.

52