

Table S1. Pathogen Host Interactions (PHI) annotation result of the two strains.

## (A) 140623

Gene ID	Identity	E value	Subject ID	Gene names	Subject description
140623GL000002	57.29	$3 \times 10^{-156}$	PHI:877	MGG_00383	Decreased virulence
140623GL000341	43.67	$1.3 \times 10^{-31}$	PHI:213	CPA1	Decreased virulence
140623GL000592	46.83	$9 \times 10^{-58}$	PHI:420	SOD2	Loss of pathogenicity
140623GL001996	40.17	$5 \times 10^{-93}$	PHI:443	CBL1	Decreased virulence
140623GL002045	42	$5 \times 10^{-24}$	PHI:711	AphA	Decreased virulence
140623GL002449	48.26	0	PHI:824	GyrA	Sensitive to chemical

## (B) SBS-1

Gene ID	Identity	E value	Subject ID	Gene names	Subject description
SBS-1GL001403	40.17	$5 \times 10^{-93}$	PHI:443	CBL1	Decreased virulence
SBS-1GL001452	42	$5 \times 10^{-24}$	PHI:711	AphA	Decreased virulence
SBS-1GL001853	48.26	0	PHI:824	GyrA	Sensitive to chemical
SBS-1GL002057	57.29	$3 \times 10^{-156}$	PHI:877	MGG_00383	Decreased virulence
SBS-1GL002353	43.67	$1 \times 10^{-30}$	PHI:213	CPA1	Decreased virulence
SBS-1GL002713	46.83	$9 \times 10^{-58}$	PHI:420	SOD2	Loss of pathogenicity

Table SII. Antibiotic Resistance Genes Database annotation result of the two strains.

## (A) 140623

Gene ID	Subject ID	Resistance type	Antibiotic resistance	Original resistance type
140623GL000185	ar db_1551	vanrg	Vancomycin	vang
140623GL000276	ar db_1877	aac6ia	Isepamicin, netilmicin, tobramycin, amikacin, sisomicin, dibekacin	aac
140623GL000518	ar db_1212	pbp2x	Penicillin	pbp
140623GL000661	ar db_2676	pmra	Ciprofloxacin, norfloxacin	pmra
140623GL000790	ar db_13	dfra26	Trimethoprim	dfra
140623GL000921	ar db_2980	baca	Bacitracin	baca
140623GL001507	ar db_1865	bcra	Bacitracin	bcr
140623GL001516	ar db_115	vanre	Vancomycin	vane
140623GL001820	ar db_2448	lsa	Lincosamide, streptogramin_b, macrolide	lsa
140623GL001911	ar db_158	mdtg	Deoxycholate, fosfomycin	mdtg
140623GL002043	ar db_409	lmb	Lincomycin	mls_abc
140623GL002433	ar db_356	vanz	Teicoplanin	vanz
140623GL002471	ar db_1571	vanrg	Vancomycin	vang
140623GL002523	ar db_2606	bcra	Bacitracin	bcr
140623GL002576	ar db_438	msra	Lincosamide, streptogramin_b, macrolide	mls_abc

## (B) SBS-1

Gene ID	Subject ID	Resistance type	Antibiotic resistance	Original resistance type
SBS-1GL000065	ar db_2676	pmra	Ciprofloxacin, norfloxacin	pmra
SBS-1GL000192	ar db_13	dfra26	Trimethoprim	dfra
SBS-1GL000323	ar db_2980	baca	Bacitracin	baca
SBS-1GL000912	ar db_1865	bcra	Bacitracin	bcr
SBS-1GL000921	ar db_115	vanre	Vancomycin	vane
SBS-1GL001226	ar db_2448	lsa	Lincosamide, streptogramin_b, macrolide	lsa
SBS-1GL001317	ar db_158	mdtg	Deoxycholate, fosfomycin	mdtg
SBS-1GL001450	ar db_409	lmb	Lincomycin	mls_abc
SBS-1GL001837	ar db_356	vanz	Teicoplanin	vanz
SBS-1GL001875	ar db_1571	vanrg	Vancomycin	vang
SBS-1GL001924	ar db_2606	bcra	Bacitracin	bcr
SBS-1GL001978	ar db_438	msra	Lincosamide, streptogramin_b, macrolide	mls_abc
SBS-1GL002177	ar db_1212	pbp2x	Penicillin	pbp
SBS-1GL002418	ar db_1877	aac6ia	Isepamicin, netilmicin, tobramycin, amikacin, sisomicin, dibekacin	aac
SBS-1GL002509	ar db_1551	vanrg	Vancomycin	vang

Table SIII. Virulence factor database annotation results of the two strains.

## (A) 140623

Gene_id	Subject ID	Description
140623GL000091	VFG1826	relA - relA
140623GL000158	VFG2195	EF0818 - polysaccharide lyase, family 8
140623GL000166	VFG1206	fbpC - iron(III) ABC transporter, ATP-binding protein
140623GL000185	VFG1386	phoP - phoP
140623GL000194	VFG1855	htpB - Hsp60, 60K heat shock protein HtpB
140623GL000270	VFG0344	hitC - iron(III) ABC transporter, ATP-binding protein
140623GL000314	VFG0964	hasC - UDP-glucose pyrophosphorylase
140623GL000374	VFG0077	clpP - ATP-dependent Clp protease proteolytic subunit
140623GL000428	VFG2158	lmo0931 - lipoate protein ligase
140623GL000592	VFG1867	sodB - superoxide dismutase
140623GL000620	VFG0080	clpE - ATP-dependent protease
140623GL000670	VFG1390	mprA - hypothetical protein Rv0981
140623GL000756	VFG1405	sigA - sigA
140623GL001015	VFG2161	lspA - signal peptidase II
140623GL001037	VFG0959	fbp - Fbp54
140623GL001209	VFG0079	clpC - endopeptidase Clp ATP-binding chain C
140623GL001367	VFG1298	cap8B - capsular polysaccharide synthesis enzyme Cap8B
140623GL001374	VFG2361	galE - UDP-glucose 4-epimerase
140623GL001386	VFG0925	fepC - Ferric enterobactin transport ATP-binding protein fepC
140623GL001406	VFG2162	bsh - bile salt hydrolase
140623GL001516	VFG1386	phoP - phoP
140623GL001573	VFG0963	hasB - UDP-glucose 6-dehydrogenase
140623GL001583	VFG1369	cps4E - capsular polysaccharide biosynthesis protein Cps4E
140623GL001584	VFG1300	cap8D - capsular polysaccharide synthesis enzyme Cap8D
140623GL001629	VFG0964	hasC - UDP-glucose pyrophosphorylase
140623GL001833	VFG0574	mgtB - Mg <sup>2+</sup> transport protein
140623GL001907	VFG0670	gtrB - bactoprenol glucosyl transferase
140623GL001968	VFG2165	efaA - endocarditis specific antigen
140623GL002055	VFG2197	EF0954 - sugar-binding transcriptional regulator, LacI family
140623GL002350	VFG0869	aatC - AatC ATB binding protein of ABC transporter
140623GL002477	VFG0079	clpC - endopeptidase Clp ATP-binding chain C

## (B) SBS-1

Gene_id	Subject ID	Description
SBS-1GL000024	VFG0080	clpE - ATP-dependent protease
SBS-1GL000074	VFG1390	mprA - hypothetical protein Rv0981
SBS-1GL000158	VFG1405	sigA - sigA
SBS-1GL000418	VFG2161	lspA - signal peptidase II
SBS-1GL000440	VFG0959	fbp - Fbp54
SBS-1GL000615	VFG0079	clpC - endopeptidase Clp ATP-binding chain C
SBS-1GL000769	VFG1298	cap8B - capsular polysaccharide synthesis enzyme Cap8B
SBS-1GL000776	VFG2361	galE - UDP-glucose 4-epimerase
SBS-1GL000788	VFG0925	fepC - Ferric enterobactin transport ATP-binding protein fepC
SBS-1GL000808	VFG2162	bsh - bile salt hydrolase
SBS-1GL000921	VFG1386	phoP - phoP
SBS-1GL000978	VFG0963	hasB - UDP-glucose 6-dehydrogenase
SBS-1GL000988	VFG1369	cps4E - capsular polysaccharide biosynthesis protein Cps4E
SBS-1GL000989	VFG1300	cap8D - capsular polysaccharide synthesis enzyme Cap8D
SBS-1GL001036	VFG0964	hasC - UDP-glucose pyrophosphorylase
SBS-1GL001239	VFG0574	mgtB - Mg <sup>2+</sup> transport protein
SBS-1GL001313	VFG0670	gtrB - bactoprenol glucosyl transferase
SBS-1GL001374	VFG2165	efaA - endocarditis specific antigen
SBS-1GL001462	VFG2197	EF0954 - sugar-binding transcriptional regulator, LacI family
SBS-1GL001755	VFG0869	aatC - AatC ATB binding protein of ABC transporter
SBS-1GL001880	VFG0079	clpC - endopeptidase Clp ATP-binding chain C

Table SIII. Continued.

Gene_id	Subject ID	Description
SBS-1GL002267	VFG2158	lmo0931 - lipoate protein ligase
SBS-1GL002320	VFG0077	clpP - ATP-dependent Clp protease proteolytic subunit
SBS-1GL002380	VFG0964	hasC - UDP-glucose pyrophosphorylase
SBS-1GL002424	VFG0344	hitC - iron(III) ABC transporter, ATP-binding protein
SBS-1GL002500	VFG1855	htpB - Hsp60, 60K heat shock protein HtpB
SBS-1GL002509	VFG1386	phoP - phoP
SBS-1GL002525	VFG1206	fbpC - iron(III) ABC transporter, ATP-binding protein
SBS-1GL002534	VFG2195	EF0818 - polysaccharide lyase, family 8
SBS-1GL002601	VFG1826	relA - relA
SBS-1GL002713	VFG1867	sodB - superoxide dismutase