



### S2-3. SC type II

a. D1 region

**b. D2 region**

c. Central region

strain name

S2-4. SC type IV

a. D1 region

strain name	CC	ST	agr	SC	93/H44	85/2232	stp28	JCSC6673	TSCC15	AIS2002062	MRSA252	AIS2002054	MR108	85/2082	85/3907	86/961	SH488
93/H44	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
85/2232	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
stp28	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
JCSC6673	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
TSCC15	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
AIS2002062	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
MRSA252	CC30	ST36	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
AIS2002054	CC30	ST36	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
MR108	CC30	ST74	III	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
85/2082	CC8	ST239	I	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
85/3907	CC8	ST239	I	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
86/961	CC8	ST239	I	IVa	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.3%	
SH488	CC6	ST6	I	IVb	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	

b. D2 region

strain name	CC	ST	agr	SC	93/H44	85/2232	stp28	JCSC6673	TSCC15	AIS2002062	MRSA252	AIS2002054	MR108	85/2082	85/3907	86/961	SH488
93/H44	CC30	ST30	III	IVa	99.2%	100.0%	100.0%	100.0%	99.2%	100.0%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%	99.2%
85/2232	CC30	ST30	III	IVa	99.7%	99.2%	99.2%	99.2%	99.2%	100.0%	99.2%	100.0%	99.2%	99.2%	99.2%	99.2%	99.5%
stp28	CC30	ST30	III	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	99.2%
JCSC6673	CC30	ST30	III	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%
TSCC15	CC30	ST30	III	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%
AIS2002062	CC30	ST30	III	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%
MRSA252	CC30	ST36	III	IVa	99.7%	100.0%	99.7%	99.7%	99.7%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.5%
AIS2002054	CC30	ST36	III	IVa	99.7%	100.0%	99.7%	99.7%	99.7%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.5%
MR108	CC30	ST74	III	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.7%	99.7%	100.0%	100.0%	100.0%	100.0%	99.2%
85/2082	CC8	ST239	I	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.7%	99.7%	100.0%	100.0%	100.0%	100.0%	99.2%
85/3907	CC8	ST239	I	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.7%	99.7%	100.0%	100.0%	100.0%	100.0%	99.2%
86/961	CC8	ST239	I	IVa	100.0%	99.7%	100.0%	100.0%	100.0%	100.0%	99.7%	99.7%	100.0%	100.0%	100.0%	100.0%	99.2%
SH488	CC6	ST6	I	IVb	98.7%	98.5%	98.7%	98.7%	98.7%	98.5%	98.5%	98.5%	98.5%	98.7%	98.7%	98.7%	98.7%

c. Central region

strain name	CC	ST	agr	SC	93/H44	85/2232	stp28	JCSC6673	TSCC15	AIS2002062	MRSA252	AIS2002054	MR108	85/2082	85/3907	86/961	SH488
93/H44	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	99.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	84.5%
85/2232	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	99.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	84.5%
stp28	CC30	ST30	III	IVa	100.0%	100.0%	100.0%	100.0%	99.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	84.5%
JCSC6673	CC30	ST30	III	IVa	100.0%	99.7%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	84.5%
TSCC15	CC30	ST30	III	IVa	100.0%	99.8%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	80.6%
AIS2002062	CC30	ST30	III	IVa	100.0%	99.8%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	84.5%
MRSA252	CC30	ST36	III	IVa	99.7%	100.0%	99.7%	99.7%	99.7%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	84.5%
AIS2002054	CC30	ST36	III	IVa	99.7%	100.0%	99.7%	99.7%	99.7%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	84.5%
MR108	CC30	ST74	III	IVa	100.0%	99.7%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	84.5%
85/2082	CC8	ST239	I	IVa	100.0%	99.7%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%
85/3907	CC8	ST239	I	IVa	100.0%	99.7%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%
86/961	CC8	ST239	I	IVa	100.0%	99.7%	100.0%	100.0%	99.5%	100.0%	99.5%	99.2%	100.0%	100.0%	100.0%	100.0%	99.2%
SH488	CC6	ST6	I	IVb	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.7%

S2-5. SC type V

a. D1 region

strain name	CC	ST	agr	SC	No55	Stp-58	Stp-25	C-1C	TSCC17	SH640	01093	AIS2002059
No55	CC51	ST95	IV	Va	100.0%	100.0%	94.4%	94.4%	94.4%	94.4%	95.1%	95.1%
Stp-58	CC51	ST120	IV	Va	100.0%	100.0%	94.4%	94.4%	94.4%	94.4%	95.1%	95.1%
Stp-25	CC51	ST121	IV	Va	100.0%	100.0%	94.4%	94.4%	94.4%	94.4%	95.1%	95.1%
C-1C	CC1	ST188	I	Vb	93.4%	93.4%	93.4%	100.0%	100.0%	99.3%	99.3%	99.3%
TSCC17	CC1	ST188	I	Vb	93.4%	93.4%	93.4%	100.0%	100.0%	99.5%	99.5%	99.5%
SH640	CC1	ST188	I	Vb	93.4%	93.4%	93.4%	100.0%	100.0%	98.5%	98.5%	98.5%
01093	CC1	ST72	I	Vb	92.5%	92.5%	92.5%	98.5%	98.5%	98.5%	98.5%	98.5%
AIS2002059	CC8	ST72	I	Vb	92.5%	92.5%	92.0%	92.0%	92.0%	100.0%	100.0%	100.0%

b. D2 region

strain name	CC	ST	agr	SC	stp12	IFH556	IFH812	IFH818	RF122	IFH514	IFH568	IFH467	strain M
stp12	Minor group	ST96	III	Vla	94.0%	94.0%	94.0%	94.0%	94.0%	94.3%	93.2%	93.2%	91.9%
IFH556	CC151	ST705	II	Vlb	99.5%	100.0%	100.0%	100.0%	100.0%	93.9%	93.9%	93.9%	92.6%
IFH812	CC151	ST705	II	Vlb	99.5%	100.0%	100.0%	100.0%	100.0%	93.9%	93.9%	93.9%	92.6%
IFH818	CC151	ST705	II	Vlb	99.5%	100.0%	100.0%	100.0%	100.0%	93.9%	93.9%	93.9%	92.6%
RF122	CC151	ST151	II	Vlb	99.5%	100.0%	100.0%	100.0%	100.0%	93.9%	93.9%	93.9%	92.6%
IFH514	CC97	ST352	I	Vlc	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	100.0%	100.0%	100.0%
IFH568	CC97	ST352	I	Vlc	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	100.0%	100.0%	100.0%
IFH467	CC97	ST352	I	Vlc	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	100.0%	100.0%	100.0%
strain M	Singleton	ST1254	II	Vlc	96.6%</td								

## S2-7. SC type VI

a. D1 region

b. D2 region

strain name	CC	ST	agr	SC	MSSA47/MW2	JCS6076	AIS2002056	9/1/2619	JCSG4796	TSC9A	JCSCE665	AIS2002058	JCSCE6088	WIS	C-12B	JCSCE6908	JCSCE6909	AIS2002061	JCSCE664	NVAU2063
MSSA476	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
MW2	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
JCSCE676	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
AIS2002056	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
9/1/2619	CC1	ST76	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
JCSCE4796	CC1	ST81	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
TSCC9A	CC1	ST81	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	97.7%	96.9%	96.9%	96.1%
JCSCE665	CC45	ST45	I	Vila	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.9%	96.9%	96.1%
AIS2002058	CC45	ST45	I	Vila	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.9%	96.9%	96.1%
JCSCE608	CC45	ST45	I	Vila	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.9%	96.9%	96.1%
WIS	CC45	ST45	I	Vila	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.9%	96.9%	96.1%
C-12B	CC45	ST508	I	Vila	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.9%	96.9%	96.1%
JCSCE6908	CC398	ST398	I	Vila	96.9%	96.9%	96.9%	96.9%	96.9%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.9%	99.9%	99.1%
JCSCE6909	CC398	ST398	I	Vila	96.9%	96.9%	96.9%	96.9%	96.9%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.9%	99.9%	99.1%
AIS2002061	CC59	ST59	I	Vila	97.7%	97.7%	97.7%	97.7%	97.7%	98.7%	98.7%	98.7%	98.7%	98.7%	98.7%	98.7%	98.7%	99.0%	99.0%	99.2%
JCSCE664	CC59	ST59	I	Vila	97.7%	97.7%	97.7%	97.7%	97.7%	98.7%	98.7%	98.7%	98.7%	98.7%	98.7%	98.7%	98.7%	99.0%	99.0%	99.2%
NVAU2063	Singleton	ST1253	I	Vila/	97.4%	97.4%	97.4%	97.4%	97.4%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.7%	99.7%	99.7%	99.7%

c. Central region

strain name	CC	ST	agr	SC	MSSA471/MW2	JCS6076	AIS2002056	91/2619	JCSG4796	TSCC9A	JCS6655	AIS2002058	JCS6068	WIS	C-12B	JCS6908	JCS6678	AIS2002061	JCS6664	NVAU2063
MSSA476	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	
MW2	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	89.9%	
JCS6076	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	89.9%	
AIS2002056	CC1	ST1	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	89.9%	
91/2619	CC1	ST76	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	89.9%	
JCS24796	CC1	ST81	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	89.9%	
TSCC9A	CC1	ST81	III	Vila	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	78.4%	78.4%	78.4%	78.4%	83.5%	83.5%	89.9%	
JCS6655	CC45	ST45	I	Vlb	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	100.0%	100.0%	100.0%	100.0%	88.9%	88.9%	76.4%	
AIS2002058	CC45	ST45	I	Vlb	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	100.0%	100.0%	100.0%	100.0%	88.9%	88.9%	76.4%	
JCS6068	CC45	ST45	I	Vlb	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	100.0%	100.0%	100.0%	100.0%	88.9%	88.9%	76.4%	
WIS	CC45	ST45	I	Vlb	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	100.0%	100.0%	100.0%	100.0%	88.9%	88.9%	76.4%	
C-12B	CC45	ST508	I	Vlb	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	82.9%	100.0%	100.0%	100.0%	100.0%	88.9%	88.9%	76.4%	
JCS6908	CC398	ST398	I	Vlb	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	99.5%	99.5%	99.5%	99.5%	100.0%	88.9%	88.9%	
JCS6909	CC398	ST398	I	Vlb	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	83.4%	99.5%	99.5%	99.5%	99.5%	100.0%	88.9%	88.9%	
AIS2002061	CC59	ST59	I	Vlb	88.8%	88.8%	88.8%	88.8%	88.8%	88.8%	88.8%	88.8%	89.4%	89.4%	89.4%	89.4%	89.6%	89.6%	100.0%	
JCS6664	CC59	ST59	I	Vlb	88.8%	88.8%	88.8%	88.8%	88.8%	88.8%	88.8%	88.8%	89.4%	89.4%	89.4%	89.4%	89.6%	89.6%	100.0%	
NVAU2063	Singleton	ST1253	I	Vila	92.4%	92.4%	92.4%	92.4%	92.4%	92.4%	92.4%	92.4%	82.2%	82.2%	82.2%	82.2%	91.3%	91.3%		

## S2-8. SC type VII

a_1 D1 region	strain name	CC	ST	agr	SC	Ku	NVAU02071	NVAU02081
Ku	Minor group	ST10	NT	Villa			92.6%	92.6%
NVAU02071	CC20	ST20	I	Villb	94.9%			100.0%
NVAU02081	CC20	ST20	I	Villb	94.9%		100.0%	

**b. D2 region**

strain name	CC	ST	agr	SC	Ku	NVAU02071	NVAU02081
Ku	Minor group	ST10	NT	VIIla		93.8%	93.8%
NVAU02071	CC20	ST20	I	VIIlb	93.6%		93.8%
NVAU02081	CC20	ST20	I	VIIlb	93.6%		100.0%

c. Central region

strain name	CC	ST	agr	SC	Ku	NVAU02071	NVAU02081
Ku	Minor group	ST10	NT	VIIa		70.5%	70.5%
NVAU02071	CC20	ST20	I	VIIb	77.3%		100.0%
NVAU02081	CC20	ST20	I	VIIb	77.3%		100.0%

### S2-9. SC type X

a. D1 region	CC	ST	agr	SC	19	JCSC6074	JCSC6666
strain name							
19	CC15	ST15	II	Xa		97.3%	97.3%
JCSC6074	Minor group	ST140	IV	Xb	97.8%		100.0%
JCSC6666	Minor group	ST140	IV	Xb	97.8%	100.0%	

b. D2 region

strain name	CC	ST	agr	SC	19	JCS6074	JCS6666
19	CC15	ST15	II	Xa		93.8%	93.8%
JCS6074	Minor group	ST140	IV	Xb	96.4%		100.0%
JCS6666	Minor group	ST140	IV	Xb	96.4%	100.0%	

### c. Central region

strain name	CC	ST	agr	SC	19	JCS6074	JCS6666
19	CC15	ST15	II	Xa		78.9%	78.9%
JCS6074	Minor group	ST140	IV	Xb	86.3%		100.0%
JCS6666	Minor group	ST140	IV	Xb	86.3%	100.0%	

### S2-10. SC type X

a. D1 region

b. D2 region

c. Central region

strain name	CC	ST	agr	SC	JCS607/JCS667	JCS6671	JCS6674	JCS6907	JCS6669
JCSC6075	CC22	ST22	I	Xla	100.0%	100.0%	100.0%	100.0%	78.6%
JCSC6667	CC22	ST22	I	Xla	100.0%	100.0%	100.0%	100.0%	78.6%
JCSC6671	CC22	ST22	I	Xla	100.0%	100.0%	100.0%	100.0%	78.6%
JCSC6674	CC22	ST22	I	Xla	100.0%	100.0%	100.0%	100.0%	78.6%
JCSC6906	CC22	ST22	I	Xla	100.0%	100.0%	100.0%	100.0%	78.6%
JCSC6907	CC22	ST22	I	Xla	100.0%	100.0%	100.0%	100.0%	78.6%
JCSC6669	CC182	ST182	I	Xlb	81.1%	81.1%	81.1%	81.1%	81.1%