

Supplemental Table 1. Strains used in this study

Code	Strain Name	Relevant Genotype	Antibiotic resistance ^a	Relevant Features	Ref ^b
	TIGR4	WT	N/A	<i>Streptococcus pneumoniae</i> serotype 4 Strain TIGR4	[1]
	WU2	WT	N/A	<i>Streptococcus pneumoniae</i> serotype 3 Strain WU2	[2]
	D39	WT	N/A	<i>Streptococcus pneumoniae</i> serotype 2 Strain D39	[3]
SpnTB4	Δcps	TIGR4 <i>cps::cat</i>	Cm	Replacement of the whole <i>cps</i> locus by an Erythromycin resistance cassette	[4]
SpNTB25	$\Delta lytA$	TIGR4 $\Delta lytA::erm$	Ery	Replacement of the gene <i>lytA</i> by an Erythromycin resistance cassette	[4]
SpNTB102	$\Delta lytA \Delta cps$	TIGR4 <i>cps::cat \Delta lytA::erm</i>	Cm Ery	Replacement of the gene <i>lytA</i> by an Erythromycin resistance cassette in a non-encapsulated background	[4]
SpNTB86	TIGR4 ^{ISO4}		Sm	TIGR4 expressing serotype 4 capsule	[4]
SpNTB88	TIGR4 ^{ISO2}		Sm	TIGR4 expressing serotype 2 capsule	[4]
SpNEM42	TIGR4 ^{ISO5}		Sm	TIGR4 expressing serotype 5 capsule	[4]
SpNTB45	TIGR4 ^{ISO6A}		Sm	TIGR4 expressing serotype 6A capsule	[4]
SpNTB59	TIGR4 ^{ISO7A}		Sm	TIGR4 expressing serotype 7A capsule	[4]
SpNEM12	TIGR4 ^{ISO11A}		Sm	TIGR4 expressing serotype 11A capsule	[4]
SpNEM13	TIGR4 ^{ISO19F}		Sm	TIGR4 expressing serotype 19F capsule	[4]
SpNEM14	TIGR4 ^{ISO19A}		Sm	TIGR4 expressing serotype 19A capsule	[4]
SpnTB62	TIGR4 ^{ISO23F}		Sm	TIGR4 expressing serotype 23F capsule	[4]
SpNTB97	WU2 ^{ISO4}		Sm	WU2 expressing serotype 4 capsule	[4]
SpNTB112	WU2 ^{ISO2}		Sm	WU2 expressing serotype 2 capsule	[4]
	BLS101		N/A	TIGR4 expressing 33A capsule	[5]
	BLS140	$\Delta wciJ::aad9$ $wcJE::nptII-rpsL$	Kn Spc	TIGR4 expressing non O-Acetylated 33 capsule	[5]
	TIGRJS		Kn Sm	Non encapsulated TIGR4 containing janus cassette	[5]
1	MNK1178		N/A	Serotype 1 Clinical isolate	[4]
2	MNK0300		N/A	Serotype 5 Clinical isolate	[4]
3	MNK0009		N/A	Serotype 6B Clinical isolate	[4]
4	MNK0759		N/A	Serotype 7F Clinical isolate	[4]
6	MNK0418		N/A	Serotype 11A Clinical isolate	[4]
7	MNK0057		N/A	Serotype 15B Clinical isolate	[4]
10	MNK0361		N/A	Serotype 19F Clinical isolate	[4]
11	MNK0420		N/A	Serotype 23F Clinical isolate	[4]
	5448			Group A <i>Streptococcus</i> MIT1 clinical isolate 5448	[6]

5884ΔhasA	Ery	Capsule deficient mutant of 5448	[6]
Reynolds		<i>Staphylococcus aureus</i> Reynolds CP5 positive	[7]
JLO22		<i>Staphylococcus aureus</i> Reynolds CP5 negative	[7]

^a Cm: Chloramphenicol (4.5μg/mL), Sm Streptomycin (300μg/ml), Kn: Kanamycin (200μg/mL), Ery: Erythromycin (0.5μg/ml, 5μg/ml for GAS)

^b [1] ⁽¹⁾, [2] ⁽²⁾, [3] ⁽³⁾, [4] this study, [5] ⁽⁴⁾, [6] ⁽⁵⁾ [7] ⁽⁶⁾

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