

**Supplementary Table S5.** BLASTN analysis of the gene markers for *S. pneumoniae* and *S. pseudopneumoniae* against additional genome sequences available in GenBank by November 2019, as well as genome sequences of 20 *S. pneumoniae* and 14 *S. pseudopneumoniae* clinical strains that were not included in the pangenome analysis. The numbers indicate number of BLASTN hits of the gene markers against a set of genome sequences.

Gene marker	<i>S. pneumoniae</i>		<i>S. pseudopneumoniae</i>	
	NCBI genomes	Clinical strains <sup>a</sup>	NCBI genomes	Clinical strains <sup>b</sup>
	n=42	n=20	n=29	n=14
Pneumo_127	41	20	0	0
Pneumo_436	42	20	0	0
Pneumo_1011	40	20	2	0
Pneumo_1012	40	20	2	0
Pneumo_1013	40	20	2	0
Pneumo_1014	40	20	2	0
Pneumo_1361	42	20	0	0
Pneumo_1362	42	20	0	0
Pneumo_1961	41	20	1	0
Pneumo_1964	42	20	1	0
Pseudo_228	0	0	29	14
Pseudo_231	0	0	29	14
Pseudo_232	0	0	29	14
Pseudo_641	0	0	29	14
Pseudo_764	0	0	37	14
Pseudo_899	0	0	29	14
Pseudo_901	0	0	29	14
Pseudo_902	0	0	29	14
Pseudo_1933	0	0	26	14

<sup>a</sup>Salvà-Serra *et al.* 2017.

<sup>b</sup>This study.