

**Supplementary Table S2. List of phages used in this study.**

S. aureus phages	Viral taxonomy <sup>a</sup>		Incubation temperature for phage propagation <sup>b</sup>	Amplified host bacteria	Culture media <sup>c</sup>	Morphology (mean ± SD; nm) <sup>d</sup>		Genome size (kbp)	Description/ references
	Family	Genus				Head diameter	Tail length		
S6	Myoviridae	Not assigned	30 °C	S. aureus SA27	TSB	118.1 ± 8.5	236.9 ± 6.6	270	This study
80	Siphoviridae	N.A.	37 °C	S. aureus RN4220	TSBM			42	Chrstie <i>et al.</i> , 2010
φMR25	Siphoviridae	N.A.	37 °C	S. aureus RN4220	TSBM	57 ± 2	198 ± 19	44	Hoshiba <i>et al.</i> , 2010
S13'	Podoviridae	AHJD-like viruses	37 °C	S. aureus SA27	TSB	43.2 ± 2.3	32.1 ± 3.8	19	Takemura-Uchiyama <i>et al.</i> , 2013
S25-3	Myoviridae	Twort-like viruses	37 °C	S. aureus SA27	TSB	86.3 ± 3.9	242.5 ± 11.1	138	Takemura-Uchiyama <i>et al.</i> , 2013

<sup>a</sup>, N.A., not assigned.

<sup>b</sup>, Phage S6 had a stronger lytic activity at 30°C than at 37°C (see Figure S3).

<sup>c</sup>, TSB, tryptic soy broth; TSBM, TSB supplemented with 20 mM MgCl<sub>2</sub>.

<sup>d</sup>, SD, standard deviation.