

Table S1. Genomic characteristics of sequenced phages in this study

Phage	Lineage	Genome length (kb)	GC %	No. predicted ORFs	Similarity to STP1 (% nt id/coverage)	Genbank accession no.
STP1	1	35.283	39.0	41	100/100	MF580773
STP2	1	35.286	38.5	44	99/99	MF580774
A0	1	35.481	38.9	44	95/90	MF580765
B0	1	36.773	38.9	47	99/92	MF580766
C0	1	34.718	39.0	42	94/90	MF580768
B5	1	35.636	38.6	42	99/91	MF580767
L5A1	1	36.884	38.9	44	96/91	MF580769
7A5	1	35.936	38.7	44	99/88	MF580759
31B4	2	36.438	39.0	40	95/77	MF580764
16B8	2	34.379	38.6	38	96/75	MF580763
9B4	2	34.636	38.7	41	96/74	MF580762
7T	2	35.141	39.2	41	96/78	MF580760
V2	2	34.698	38.7	40	95/77	MF580775
R1	2	34.652	38.7	39	95/77	MF580772
MM25	3	34.059	39.0	41	96/68	MF580771
9A	3	35.604	39.5	41	91/60	MF580761
M19	4	34.328	38.9	44	93/69	MF580770

Table S2. Bacterial strains used in this study

<i>S. thermophilus</i> strain	Source
P1	UCC collection
P2	UCC collection
P3	UCC collection
P4	UCC collection
P5	UCC collection
P6	UCC collection
P7	UCC collection
P8	UCC collection
P9	UCC collection
P10	UCC collection
P11	UCC collection
P12	UCC collection
P13	UCC collection
P14	UCC collection
P15	UCC collection
P16	UCC collection
P17	UCC collection
P18	UCC collection
P19	UCC collection
P20	UCC collection
P21	UCC collection
CNRZ447	CNRZ collection
CNRZ160	CNRZ collection
CNRZ385	CNRZ collection
CNRZ887	CNRZ collection
CNRZ1443	CNRZ collection
CNRZ1151	CNRZ collection
CNRZ1202	CNRZ collection
MM1	UCC collection
MM7	UCC collection
MM20	UCC collection
M8	UCC collection
MM8	UCC collection
MM15	UCC collection
MM21	UCC collection
AVA1122	UCC collection
AVA116	UCC collection
AVA117	UCC collection
AVA118	UCC collection
AVA119	UCC collection
STR1	UCC collection
STR2	UCC collection
4033	UCC collection
1205.3	UCC collection
4149	UCC collection
4031	UCC collection
4097	UCC collection
1A	UCC collection
4145	UCC collection

4043	UCC collection
4053	UCC collection
4137	UCC collection
