

Table S1. Whole-genome-level polymorphisms among phages analyzed in this study

Location	Sb1_ref	Sb1 8383	Sb1M 9832	Sb1M 6168	Codon	ORF	Gene	Prot_ID
1	G	A	A	A	NA	NA	NA	NA
2	T [L]	C [S]	C [S]	C [S]	2nd	1	hypothetical protein	AEJ79812.1
9849	T [K]	C [R]	C [R]	C [R]	2nd	21	conserved hypothetical protein	AEJ79664.1
9910	C [V]	G [L]	G [L]	G [L]	3rd	21	conserved hypothetical protein	AEJ79664.1
14529	G	A	A	A	NA	NA	NA	NA
14558	G [S]	A [F]	A [F]	A [F]	2nd	30	conserved hypothetical protein	AEJ79673.1
14657	A [F]	G [S]	G [S]	G [S]	2nd	30	conserved hypothetical protein	AEJ79673.1
14859	A [I]	T [stop]	T [stop]	T [stop]	2nd	31	conserved hypothetical protein	AEJ79674.1
14860	T [I]	A [stop]	A [stop]	A [stop]	3rd	31	conserved hypothetical protein	AEJ79674.1
14866	A [C]	G [R]	G [R]	G [R]	3rd	31	conserved hypothetical protein	AEJ79674.1
14882	T [K]	C [K]	C [K]	C [K]	1st	31	conserved hypothetical protein	AEJ79674.1
16431	G [T]	T [K]	T [K]	T [K]	2nd	35	conserved hypothetical protein	AEJ79678.1
17107	T [R]	T [R]	T [R]	T [R]	1st	35	conserved hypothetical protein	AEJ79678.1
17782	C [D]	A [Y]	A [Y]	A [Y]	3rd	35	conserved hypothetical protein	AEJ79678.1
21046	A	G	G	G	NA	NA	promoter proximal to ORF 41 reverse	NA
24175	NA	AA-ins [stop]	AA-ins [stop]	AA-ins [stop]	1st	48	conserved hypothetical protein	AEJ79691.1
24339	del 60bp	ins 60bp	ins 60bp	ins 60bp	NA	49	conserved hypothetical protein	AEJ79692.1
31769	G [H]	C [D]	C [D]	C [D]	3rd	58	conserved hypothetical protein	AEJ79699.1
31870	G [T]	T [N]	T [N]	T [N]	2nd	58	conserved hypothetical protein	AEJ79699.1
31872	G [A]	T [A]	T [A]	T [A]	1st	58	conserved hypothetical protein	AEJ79699.1
31888	G [A]	A [V]	A [V]	A [V]	2nd	58	conserved hypothetical protein	AEJ79699.1
31956	G	T	T	T	NA	NA	NA	NA
31964	G	T	T	T	NA	NA	NA	NA
31977	G	T	T	T	NA	NA	NA	NA
31990	G	A	A	A	NA	NA	NA	NA
31991	G	A	A	A	NA	NA	NA	NA
31992	G	C	C	C	NA	NA	NA	NA
32005	C	T	T	T	NA	NA	NA	NA
32018	G	A	A	A	NA	NA	NA	NA
32021	G	A	A	A	NA	NA	NA	NA
32060	G	T	T	T	NA	NA	NA	NA
32061	G	T	T	T	NA	NA	NA	NA
32092	G	T	T	T	NA	NA	NA	NA
32113	G	T	T	T	NA	NA	NA	NA
32119	G	T	T	T	NA	NA	NA	NA
32268	A	G	G	G	NA	NA	iteron repeat	NA
32270	A	C	C	C	NA	NA	iteron repeat	NA
32271	G	A	A	A	NA	NA	iteron repeat	NA
32313	TA	GT	GT	GT	NA	NA	iteron repeat	NA
32317	AT	TA	TA	TA	NA	NA	iteron repeat	NA
32325	4X iteron	3X iteron	3X iteron	3X iteron	NA	NA	iteron repeat	NA
35900	T [T]	C [T]	C [T]	C [T]	3rd	65	terminase large subunit	AEJ79707.1
36038	A [P]	T [P]	T [P]	T [P]	3rd	65	terminase large subunit	AEJ79707.1
36908	T [Y]	C [Y]	C [Y]	C [Y]	3rd	65	terminase large subunit	AEJ79707.1
37974	T [I]	C [I]	C [I]	C [I]	3rd	66	conserved hypothetical protein	AEJ79708.1
38060	T	C	C	C	*	67	conserved hypothetical protein	AEJ79709.1
38238	T [S]	C [S]	C [S]	C [S]	3rd	68	conserved hypothetical protein	AEJ79710.1
38274	T [S]	C [S]	C [S]	C [S]	3rd	68	conserved hypothetical protein	AEJ79710.1
38307	C [Y]	T [Y]	T [Y]	T [Y]	3rd	68	conserved hypothetical protein	AEJ79710.1
39668-39685	NA	PEP -> P	PEP -> P	PEP -> P	NA	71	conserved hypothetical protein	AEJ79711.1
39700	NA	C	C	C	NA	71	conserved hypothetical protein	AEJ79711.1
39933	T	Tdel	Tdel	Tdel	NA	NA	terminator overlapping ORF71	NA
40973	A [K]	G [K]	G [K]	G [K]	3rd	75	putative portal protein	AEJ79714.1
47961	A [E]	C [D]	Adel	Adel	3rd	82	conserved hypothetical protein	AEJ79720.1
47964	C [G]	T [G]	C [G]	C [G]	3rd	82	conserved hypothetical protein	AEJ79720.1
47966	T	A	T	T	2nd	82	conserved hypothetical protein	AEJ79720.2
47967	A	T	A	A	2nd	82	conserved hypothetical protein	AEJ79720.3
47968	T	A	T	T	2nd	82	conserved hypothetical protein	AEJ79720.4
47971	A	G	A	A	NA	NA	NA	NA
47972	N	Gins	Gins	Gins	NA	NA	NA	NA
47999	N	del	del	del	NA	NA	NA	NA
48023	NA	Gins	Gins	Gins	NA	NA	NA	NA
54383	C	A	A	A	3rd	92	conserved hypothetical protein	AEJ79731.1
54384	C [A]	Gins	Gins	Gins	1st	92	conserved hypothetical protein	AEJ79731.1
54444	G	Gdel	Gdel	Gdel	NA	NA	NA	NA
62389	C [P]	C [P]	C [P]	C [P]	1st	98	putative glycerophosphoryl diester phosphodiesterase	YP_008873613.1
69638	T [F]	C [S]	C [S]	C [S]	2nd	103	conserved hypothetical protein	AEJ79740.1
80037	T [Y]	C [Y]	C [Y]	C [Y]	3rd	110	DNA helicase UvsW	AEJ79747.1
80644	G [A]	A [T]	A [T]	A [T]	1st	110	DNA helicase UvsW	AEJ79747.1
82588	C [H]	A [N]	A [N]	A [N]	1st	112	putative DNA helicase subunit	AEJ79749.1
82748	G [G]	A [E]	A [E]	A [E]	2nd	112	putative DNA helicase subunit	AEJ79749.1
82749	G [G]	A [E]	A [E]	A [E]	3rd	112	putative DNA helicase subunit	AEJ79749.1
83363	T [V]	C [A]	C [A]	C [A]	2nd	112	putative DNA helicase subunit	AEJ79749.1
87718	T [S]	T [S]	T [S]	T [S]	1st	116	conserved hypothetical protein	AEJ79753.1
87884	C [P]	A [P]	A [P]	A [P]	3rd	misc	misc feature putative DNA primase	NA
87889	G [G]	A [E]	A [E]	A [E]	2nd	misc	misc feature	NA
87906	T [I]	C [L]	C [L]	C [L]	1st	misc	misc feature	NA
87917	G [W]	T [C]	T [C]	T [C]	3rd	misc	misc feature	NA
87939	A [K]	Ains	Ains	Ains	1st	misc	misc feature	NA
87949	T [F]	C [F]	C [F]	C [F]	2nd	misc	misc feature	NA
87955	stop	T [V]	T [V]	T [V]	2nd	misc	misc feature	NA
87957	G [G]	A [K]	A [K]	A [K]	1st	misc	misc feature	NA
87970	T	C [D]	C [D]	C [D]	3rd	misc	misc feature	NA
87972	N	C	C	C	NA	misc	misc feature	NA
88228	G	A [G] 3rd	A [G] 3rd	A [G] 3rd	NA	misc	misc feature	NA
88273	C	T [P] 3rd	T [P] 3rd	T [P] 3rd	NA	misc	misc feature	NA
89697	A [E]	G [E]	G [E]	G [E]	3rd	120	conserved hypothetical protein	AEJ79755.1
89699	A [E]	C [A]	C [A]	C [A]	2nd	120	conserved hypothetical protein	AEJ79755.1
89703	A [Q]	G [Q]	G [Q]	G [Q]	3rd	120	conserved hypothetical protein	AEJ79755.1
89707	G [E]	A [K]	A [K]	A [K]	1st	120	conserved hypothetical protein	AEJ79755.1
90611	T [G]	C [G]	C [G]	C [G]	3rd	122	NrdI flavodoxin-like protein	AEJ79757.1
98777	T [Y]	C [H]	C [H]	C [H]	1st	129b	RFO19-like protein	AEJ79811.1
99619	A [K]	G [K]	G [K]	G [K]	3rd	132	putative HNH endonuclease	AEJ79765.1
100,707	G [M]	Tins [I]	Tins [I]	Tins [I]	3rd	129c	NA	NA
100739	A [K]	delA [D]	delA [D]	delA [D]	2nd	129c	NA	NA
100740	G [K]	delG [D]	delG [D]	delG [D]	3rd	129c	NA	NA

100983	N	A	A	A	d	135	conserved hypothetical protein	AEJ79766.1
101788	A	G	G	G	NA	NA	NA	NA
101798	NA	Tins	Tins	Tins	NA	NA	NA	NA
101833	C[A]	C[A]	C[A]	A[E]	2nd	ORF020 G1	hypothetical protein	AAAX92102.1
101838	T	A	A	A	NA	NA	NA	NA
102174	C	C	C	C	NA	NA	NA	NA
107725	G	Gdel	Gdel	Gdel	NA	NA	misc feature	NA
108037	A	G	A	A	NA	NA	NA	NA
109146	G[R]	G[R]	T[I]	T[I]	2nd	147	hypothetical protein	YP_008873656.
109190	G[A]	G[A]	G[A]	G[A]	1st	147	hypothetical protein	YP_008873656.
109269	GATATT[DI]	GATATT[DI]	GATATT[DI]	GATATT[DI]	NA	147	hypothetical protein	YP_008873656.1
109577	A [V]	T [V]	T [V]	T [V]	3rd	148	conserved hypothetical protein	AEJ79777.1
109834	G[V]	G[V]	A[I]	G[V]	1st	149	hypothetical protein	YP_008873658.1
109903	A[K]	A[K]	G[E]	G[E]	1st	149	hypothetical protein	YP_008873658.1
114893	A [R]	G [G]	G [G]	G [G]	3rd	157	conserved hypothetical protein	AEJ79786.1
114974	G [E]	A [K]	A [K]	A [K]	1st	157	conserved hypothetical protein	AEJ79786.1
116,459	NA	ins 7490bp	ins 7490bp	ins 7490bp	NA	NA	misc feature	NA
119846	C [P]	A [T]	A [T]	A [T]	1st	165	putative nicotinamide phosphoribosyl transferase	AEJ79793.1
120185	NA	Cdel	Cdel	Cdel	NA	NA	NA	NA
120261	A	G	G	G	NA	NA	NA	NA
120292	C	G	G	G	NA	NA	NA	NA
120304	NA	Tins	Tins	Tins	NA	NA	NA	NA
120350	A	G	G	G	NA	NA	NA	NA
123276 to 123740	Region 2 allele A	Region 2 allele B	Region 2 allele C	Region 2 allele C	NA	NA	NA	NA
124516	T [L]	C [L]	C [L]	C [L]	1st	177	conserved hypothetical protein	AEJ79802.1
124573	G	A	A	A	NA	NA	NA	NA
124575	C	Cdel	Cdel	Cdel	NA	NA	NA	NA
127101	del	Ains	Ains	Ains	NA	NA	NA	NA

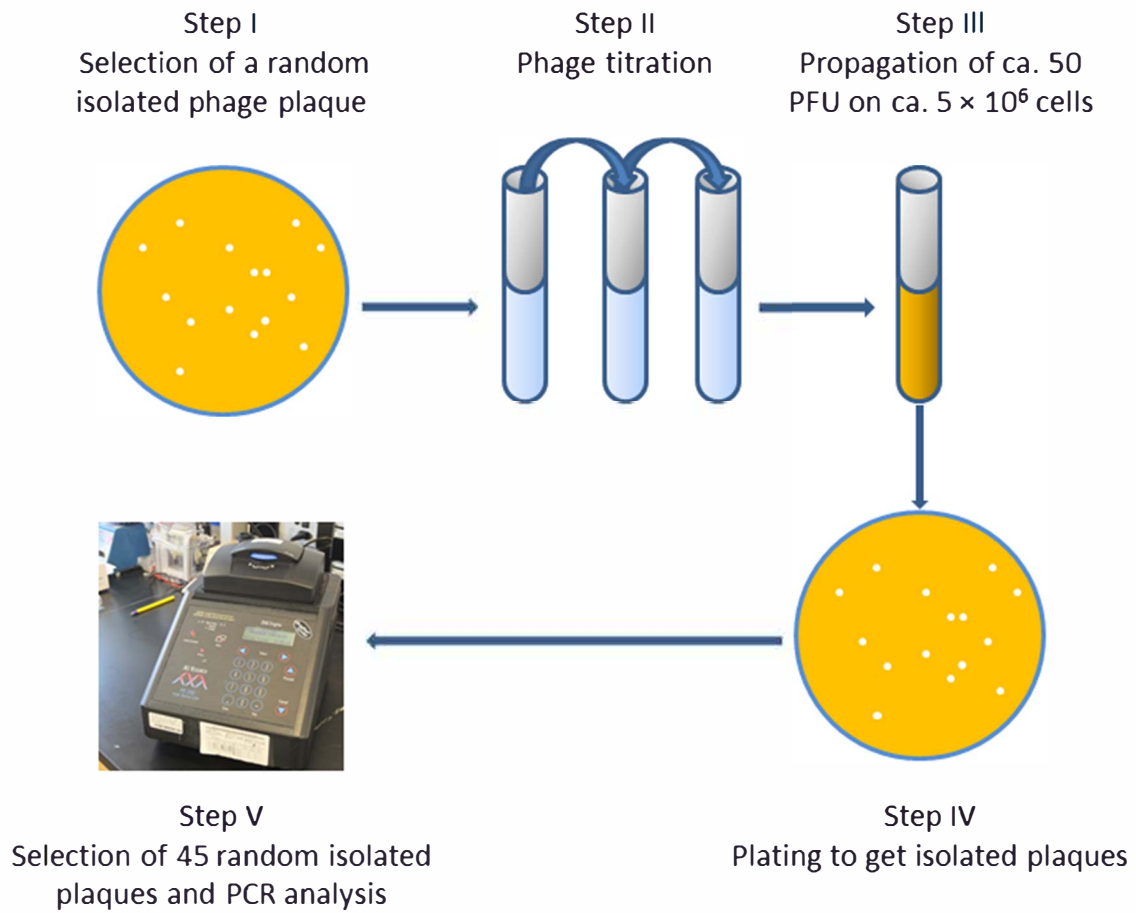


Fig. S1. Schematic representation of a single-plaque diversity generation experiment.