Supplementary Table 3 Genes present in all the sequenced T4P-dependent phages used in this study. Conserved genes found in every phage are shaded grey. The genomes in which particular accessory genes (AG) appear are indicated.

	Accesory Protein Length	*Phage Genomes*												*Refseq ID of one Example*	*Putative Function or Sequence Similarity*
		JBD24	*JBD30*	*JBD93*	*JBD88*	*MP29*	*JBD23*	*JBD69*	*JBD5*	*MP22*	*JBD16C*	*JBD8*	*JBD26*		
CG1														YP_001469130.1	cI-like repressor
CG2														YP_001469131.1	Ner-like repressor
CG3														YP_001469132.1	
AG1	108		AG1			AG1	AG1	AG1				AG1	AG1	YP_007392311.1	
AG2	69			AG2	AG2				AG2	AG2	AG2			YP_007392708.1	
AG3	84		AG3									AG3		YP_007392312.1	
AG4	136					AG4	AG4	AG4					AG4	YP_002332430.1	
AG5	143	AG5												YP_007392767.1	
CG4														YP_001469134.1	Transposase A
CG5														YP_001469135.1	Transposase B
CG6														YP_001469136.1	
AG6	211		AG6	AG6					AG6				AG6	YP_007392316.1	
CG7														YP_001469137.1	
CG8														YP_001469138.1	
CG9														YP_001469139.1	
CG10		CG10 N	CG10 N	CG10 N	CG10 N CG10 C	CG10 FL	CG10 N CG10 C	CG10 N CG10 C	CG10 N CG10 C	CG10 FL	CG10 N CG10 C	CG10 N CG10 C	CG10 N	YP_001469140.1 YP_007392717.1	Similar to Mu Gam
AG7	92	AG7		AG7				AG7	AG7			AG7	AG7	YP_007392718.1	
AG8	67		AG8											YP_007392321.1	
AG9	102	AG9	AG9		AG9	AG9	AG9			AG9	AG9		AG9	YP_007392322.1	
AG10	73			AG10				AG10	AG10			AG10		YP_007392719.1	
CG11		CG11 N CG11 C	CG11 N CG11 C	CG11 N CG11 C	CG11 N CG11 C	CG11 FL	CG11 N CG11 C	CG11 N CG11 C	CG11 N CG11 C	CG11 FL	CG11 N CG11 C	CG11 N CG11 C	CG11 N CG11 C	YP_001469142.1 YP_007392324.1	
AG11	149							AG11				AG11			
CG12														YP_001469143.1	
AG12	73							AG12				AG12			
AG13	224	AG13												YP_007392780.1	
AG14	98	AG14	AG14	AG14	AG14	AG14	AG14		AG14	AG14	AG14		AG14	YP_007392326.1	
CG13														YP_001469145.1	
CG14														YP_001469146.1	Mor transcription activator
CG15														YP_001469147.1	
CG16														YP_001469148.1	holin
CG17														YP_001469149.1	peptidoglycan degrading
AG15	80	AG15		AG15	AG15		AG15		AG15	AG15	AG15		AG15	YP_007392729.1	
AG16	39		AG16					AG16				AG16		YP_007392332.1	
CG18														YP_001469151.1	RZ-like lysis
AG17	37	AG17	AG17	AG17	AG17		AG17	AG17	AG17		AG17	AG17	AG17	YP_007392334.1	
CG19														YP_001469152.1	
CG20														YP_001469153.1	Small Terminase Subunit
AG18	83	AG18											AG18	YP_007392792.1	
AG19	164		AG19					AG19				AG19		YP_007392337.1	
AG20	83	AG20											AG20	YP_007392793.1	
CG21														YP_001469154.1	Large Terminase Subunit
CG22														YP_001469155.1	Portal
CG23														YP_001469156.1	Similar to Mu gpF
CG24														YP_001469157.1	Similar to Mu gpG
anti-CRISPR					acr					acr	acr			YP_001469158.1	
anti-CRISPR				acr	acr		acr		acr	acr	acr			YP_001469159.1	
anti-CRISPR									acr					YP_007392738.1	
anti-CRISPR		acr											acr	YP_007392798.1	
anti-CRISPR							acr		acr					YP_007392740.1	
anti-CRISPR			acr					acr				acr		YP_007392342.1	
anti-CRISPR		acr											acr	YP_007392799.1	
anti-CRISPR						acr								YP_002332454.1	
anti-CRISPR							acr								
anti-CRISPR associated														YP_001469160.1	
AG30	41	AG30		AG30	AG30								AG30	YP_007392801.1	
CG25														YP_001469161.1	Head Protease
AG31	132					AG31	AG31		AG31				AG31	YP_007392743.1	
CG26														YP_001469162.1	Major Head
CG27														YP_001469163.1	Packaging Chaperone
CG28														YP_001469164.1	
CG29														YP_001469165.1	Head-Tail Connector
CG30														YP_001469166.1	Tail Terminator
CG31														YP_001469167.1	
CG32														YP_001469168.1	Tail Tube
CG33														YP_001469169.1	Tail Chaperone
CG34														YP_001469170.1	Tail Chaperone
CG35														YP_001469171.1	Tape Measure
CG36														YP_001469172.1	Tail Protein
CG37														YP_001469173.1	Tail Protein
CG38														YP_001469174.1	Tail Protein
CG39														YP_001469175.1	Tail Protein
CG40														YP_001469176.1	Tail Protein
CG41														YP_001469177.1	Tail Protein
CG42														YP_001469178.1	Tail Protein
CG43														YP_001469179.1	
CG44														YP_001469180.1	
AG32	66	AG32	AG32	AG32	AG32		AG32	AG32	AG32		AG32	AG32	AG32	YP_007392763.1	
Accessory Genes (Total)		11	10	10	9	5	9	10	10	6	8	10	13		
anti-CRISPR		3	2	2	3	2	3	2	3	3	3	2	3		

Abbreviations: CG, conserved gene; AG, accessory gene; acr, anti-CRISPR; N, C, FL, CG10 and CG11 are present in full-length (FL) forms in some phages, while in others the N-terminal (N) and C-terminal (C) domains are separate open reading frames. Putative gene functions were assigned through BLAST searches and or comparisons using HHpred REF-Söding, J. (2005). Protein homology detection by HMM-HMM comparison. Bioinformatics 21, 951–960.