

Supplementary Table 1. Gene products of TMA and the orthologs of YS40

TMA Gene ID	Length (nt)	YS40 Gene ID	Length (nt)	Predicted gene product	Amino acid sequence identity (%)
TMA_001	1842	YSP_001	1932	distal tail fiber protein	87
TMA_002	2646	YSP_002	2646	hypothetical protein	97
TMA_003	2838	YSP_003	2838	portal protein	99
TMA_004	657	YSP_004	657	hypothetical protein	99
TMA_005	435	YSP_005	435	S-adenosylmethionine decarboxylase	97
TMA_006	225	YSP_006	225	hypothetical protein	100
TMA_007	612	YSP_007	612	hypothetical protein	99
TMA_008	543	YSP_008	543	dUTPase	99
TMA_009	828	YSP_009	828	flavin-dependent thymidylate synthase	99
TMA_010	516	YSP_010	516	hypothetical protein	100
TMA_011	474	YSP_011	474	hypothetical protein	93
TMA_012	1011	YSP_012	1020	RecA/RadA recombinase	96
TMA_013	576	YSP_013	576	recombination protein ERF	99
TMA_014	1344	YSP_014	1344	DNA helicase DnaB	100
TMA_015	294	YSP_015	294	hypothetical protein	100
TMA_016	330	YSP_016	330	hypothetical protein	100
TMA_017	1110	YSP_017	1110	IMP dehydrogenase/GMP reductase	100
TMA_018	411	YSP_018	411	DNA binding HTH-domain protein	95
TMA_019	1236	YSP_019	1236	hypothetical protein	94
TMA_020	438	YSP_020	438	hypothetical protein	100
TMA_021	381	YSP_021	381	hypothetical protein	98
TMA_022	774	YSP_022	774	hypothetical protein	98
TMA_023	1677	YSP_023	1677	DNA primase bacterial DnaG type	99
TMA_024	609	YSP_024	609	thymidine kinase	99
TMA_025	708	YSP_025	714	ClpP protease	97
TMA_026	927	YSP_026	927	RecB family exonuclease	97
TMA_027	1350	YSP_027	1350	DEAD domain helicase	99
TMA_028	1401	YSP_028	1401	hypothetical protein	98
TMA_029	510	YSP_029	510	sugar-phosphate nucleotidyltransferase	98
TMA_030	1758	YSP_030	1758	hypothetical protein	99

TMA_031	693	YSP_031	714	hypothetical protein	46
TMA_032	480	YSP_032	474	hypothetical protein	53
TMA_033	2112	YSP_033	2112	DNA polymerase	99
TMA_034	291	YSP_034	291	hypothetical protein	97
TMA_035	267	YSP_035	267	hypothetical protein	98
TMA_036	279	YSP_036	279	hypothetical protein	96
TMA_037	366	YSP_037	366	hypothetical protein	97
TMA_038	429	YSP_038	429	deoxycytidylate deaminase	88
		YSP_039	429	zinc metalloproteinase motif-containing protein	-
TMA_039	525	YSP_040	525	hypothetical protein	78
TMA_040	2394	YSP_041	2394	ribonucleotide reductase alpha subunit	90
TMA_041	600	YSP_042	600	ribonucleotide reductase alpha subunit	100
TMA_042	207	YSP_043	207	hypothetical protein	94
TMA_043	453	YSP_044	453	hypothetical protein	96
TMA_044	330	YSP_045	330	hypothetical protein	91
TMA_045	216	YSP_046	216	hypothetical protein	88
TMA_046	444	YSP_047	444	hypothetical protein	72
TMA_047	309	YSP_048	309	hypothetical protein	79
TMA_048	348	YSP_049	348	hypothetical protein	80
TMA_049	456	YSP_050	456	hypothetical protein	98
TMA_050	1461	YSP_051	1473	hypothetical protein	91
TMA_051	873	YSP_052	873	UDP-3-O-[3-hydroxy-myristoyl] glucosamine N-acyltransferase	86
TMA_052	528	YSP_053	528	hypothetical protein	73
TMA_053	486	YSP_054	486	hypothetical protein	87
TMA_054	705	YSP_055	702	Peptidoglycan-binding domain 1 protein	97
TMA_055	1023	YSP_056	1023	conserved bacterial protein	98
TMA_056	1338	YSP_057	1338	SpoVR	100
TMA_057	1851	YSP_058	1851	hypothetical protein	97
TMA_058	1860	YSP_059	1860	serine kinase	99
TMA_059	588	YSP_060	588	dNMP kinase	100
TM_tRNA	76	YS_tRNA	76		-
TMA_060	450	YSP_061	450	hypothetical protein	98
TMA_061	1860	YSP_062	1869	terminase large subunit	98
TMA_062	789	YSP_063	789	hypothetical protein	99
TMA_063	381	YSP_064	381	hypothetical protein	99

TMA_064	609	YSP_065	552	TP-like protein (YS40)/hypothetical protein (TMA)	65
TMA_065	267	YSP_066	267	hypothetical protein	98
TMA_066	741	YSP_067	741	hypothetical protein	100
TMA_067	651	YSP_068	651	hypothetical protein	99
TMA_068	1947	YSP_069	1947	tail sheath protein	99
TMA_069	711	YSP_070	711	hypothetical protein	100
TMA_070	663	YSP_071	663	phage conserved protein	99
TMA_071	516	YSP_072	516	hypothetical protein	97
TMA_072	1413	YSP_073	1413	major structural protein	97
TMA_073	1635	YSP_074	1635	phage prohead protease	98
TMA_074	261	YSP_075	261	hypothetical protein	98
TMA_075	4578	YSP_076	4578	hypothetical protein	99
TMA_076	5283	YSP_077	5235	hypothetical protein	85
TMA_077	384	YSP_078	366	hypothetical protein	89
TMA_078	4578	YSP_079	4575	helicase	90
TMA_079	864	YSP_080	864	hypothetical protein	99
TMA_080	1953	YSP_081	1953	hypothetical protein	97
TMA_081	1881	YSP_082	1839	hypothetical protein	43
TMA_082	243	YSP_083	228	hypothetical protein	54
TMA_083	204			hypothetical protein	-
		YSP_084	231	hypothetical protein	-
TMA_084	153	YSP_085	153	hypothetical protein	98
TMA_085	252	YSP_086	252	hypothetical protein	95
		YSP_087	237	hypothetical protein	-
TMA_086	249	YSP_088	246	hypothetical protein	55
TMA_087	762			hypothetical protein	-
TMA_088	486	YSP_089	486	hypothetical protein	73
TMA_089	366	YSP_090	456	hypothetical protein	63
TMA_090	231	YSP_091	609	hypothetical protein	84
		YSP_092	435	hypothetical protein	-
TMA_091	423	YSP_093	426	hypothetical protein	55
		YSP_094	447	hypothetical protein	-
TMA_092	177	YSP_095	177	hypothetical protein	93
TMA_093	183	YSP_096	183	hypothetical protein	97
		YSP_097	408	hypothetical protein	-

TMA_094	546	YSP_098	546	hypothetical protein	97
TMA_095	543	YSP_099	543	hypothetical protein	96
		YSP_100	591	hypothetical protein	-
		YSP_101	513	hypothetical protein	-
TMA_096	537	YSP_102	537	hypothetical protein	99
TMA_097	486	YSP_103	489	hypothetical protein	95
TMA_098	516	YSP_104	516	hypothetical protein	95
		YSP_105	531	hypothetical protein	-
TMA_099	135			hypothetical protein	-
TMA_100	150			hypothetical protein	-
TMA_101	333	YSP_106	522	hypothetical protein	97
TMA_102	186			hypothetical protein	-
TMA_103	288			hypothetical protein	-
TMA_104	507			hypothetical protein	-
TMA_105	1710	YSP_107	1689	hypothetical protein	88
TMA_106	1044	YSP_108	1044	ATPase	95
TMA_107	696	YSP_109	696	hypothetical protein	99
TMA_108	747	YSP_110	747	hypothetical protein	94
TMA_109	393	YSP_111	393	hypothetical protein	85
TMA_110	534	YSP_112	546	hypothetical protein	96
		YSP_113	540	hypothetical protein	-
TMA_111	492	YSP_114	492	glycosyltransferase	100
TMA_112	243	YSP_115	243	hypothetical protein	98
TMA_113	477	YSP_116	477	hypothetical protein	98
TMA_114	558	YSP_117	558	hypothetical protein	96
TMA_115	552	YSP_118	552	hypothetical protein	97
TMA_116	567	YSP_119	567	hypothetical protein	91
TMA_117	450	YSP_120	450	hypothetical protein	97
TMA_118	495	YSP_121	495	hypothetical protein	98
TMA_119	504	YSP_122	504	hypothetical protein	99
TMA_120	519	YSP_123	519	hypothetical protein	96
		YSP_124	492	hypothetical protein	-
TMA_121	513	YSP_125	516	hypothetical protein	68
TMA_122	585	YSP_126	585	hypothetical protein	98
TMA_123	498	YSP_127	498	hypothetical protein	99

TMA_124	471	YSP_128	471	hypothetical protein	98
TMA_125	513	YSP_129	513	hypothetical protein	98
TMA_126	507	YSP_130	507	hypothetical protein	98
TMA_127	429	YSP_131	429	hypothetical protein	96
TMA_128	537	YSP_132	537	hypothetical protein	100
TMA_129	648	YSP_133	648	hypothetical protein	99
TMA_130	345	YSP_134	570	hypothetical protein	90
TMA_131	1470			transposase	-
TMA_132	561			resolvase-like protein	-
TMA_133	573	YSP_135	573	hypothetical protein	98
TMA_134	423	YSP_136	423	hypothetical protein	98
TMA_135	660	YSP_137	660	hypothetical protein	99
TMA_136	564	YSP_138	564	hypothetical protein	98
TMA_137	1605	YSP_139	1605	hypothetical protein	96
TM_tRNA	77	YS_tRNA	77		-
TM_tRNA	77	YS_tRNA	77		-
TMA_138	552	YSP_140	552	hypothetical protein	98
TMA_139	174	YSP_141	174	hypothetical protein	87
TMA_140	3045	YSP_142	3045	hypothetical protein	98
TMA_141	525	YSP_143	525	hypothetical protein	99
TMA_142	1041	YSP_144	1041	M27/M37 peptidase	95
TMA_143	951	YSP_145	951	hypothetical protein	100
TMA_144	261	YSP_146	261	hypothetical protein	100
TMA_145	186	YSP_147	186	hypothetical protein	100
TMA_146	396	YSP_148	396	hypothetical protein	99
TMA_147	489	YSP_149	489	hypothetical protein	99
TMA_148	1989	YSP_150	1989	baseplate assembly protein	99
TMA_149	1896	YSP_151	1896	hypothetical protein	89
TMA_150	2391	YSP_152	2391	wac fibrin neck whisker	89
TMA_151	2112	YSP_153	2112	hypothetical protein	97
TMA_152	900	YSP_154	900	hypothetical protein	98
TMA_153	351	YSP_155	351	hypothetical protein	100
TMA_154	864	YSP_156	864	hypothetical protein	100
TMA_155	801	YSP_157	801	hypothetical protein	99
TMA_156	4044	YSP_158	4044	hypothetical protein	98

TMA_157	525	YSP_159	525	hypothetical protein	99
TMA_158	213	YSP_160	213	hypothetical protein	100
TMA_159	1068	YSP_161	1068	radical SAM superfamily enzyme	99
TMA_160	954	YSP_162	954	hypothetical protein	98
TMA_161	633	YSP_163	633	hypothetical protein	98
TMA_162	546	YSP_164	546	hypothetical protein	99
TMA_163	630	YSP_165	630	hypothetical protein	99
TMA_164	390	YSP_166	390	hypothetical protein	97
TMA_165	1494	YSP_167	1494	hypothetical protein	98
TMA_166	1086	YSP_168	1086	hypothetical protein	99
TMA_167	570	YSP_169	570	hypothetical protein	98
TMA_168	264	YSP_170	264	hypothetical protein	100

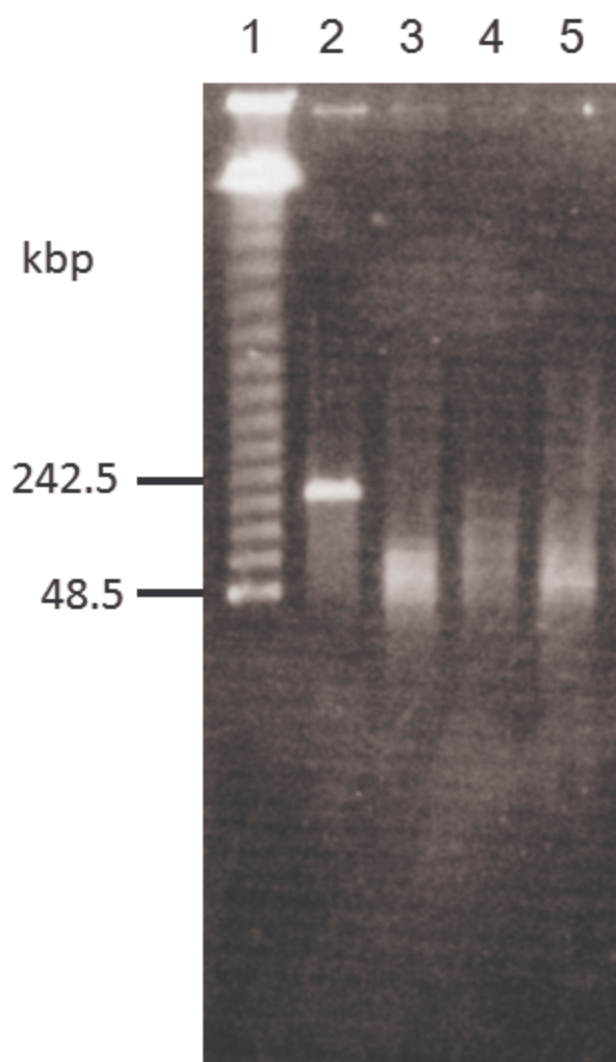


Figure S1. PFGE of ϕ YS40 DNA. Lane1, lambda DNA ladders; lane2, intact DNA; lane 3-5, *Cfr10I*-, *AcdI*- and *SacI*-digested DNA, respectively.