SUPPLEMENTAL TABLES

Table S1. *R. typhi* strain Wilmington *in silico* signal peptide prediction and *in vitro 'phoA* gene fusion assay results. Results are presented by each individual prediction program for each *R. typhi* protein predicted to contain a signal peptide (see Methods and Materials). For the Phobius program (P), the *Phobius: TM?* column indicates the number of transmembrane passes predicted for each protein; the *Phobius: Prediction* column indicates whether each protein was predicted to be cytoplasmic (CYT) or non-cytoplasmic (NON-CYT); the *Phobius: Signal Peptide* column indicates if a protein was predicted to contain an N-terminal signal peptide; and the *Phobius: Cleavage Site* column indicates the amino acid location and sequence of the predicted signal peptide cleavage sites. For the LipoP version 1.0 program (L), the *LipoP: Prediction* column indicates whether each protein was predicted to contain a signal peptide cleaved by signal peptidase I (SpI) or by signal peptidase II (SpII), or whether the protein was predicted to be cytoplasmic (CYT) or to contain transmembrane helices (TMH). For the SignalP version 3.0 neural network (NN) and hidden Markov model (HMM) algorithms, predictions for the presence or absence of a signal peptide and the corresponding amino acid sequence for each putative cleavage site are listed. The *Prediction Concordance* column indicates which individual programs predicted a signal peptide for each program, and the *Cleavage Site Concordance* column indicates the number of unique signal peptide cleavage sites (*i.e.*, amino acid locations) predicted by the four programs. For example, if all four programs predicted a signal peptide with the same cleavage site for a protein, then the value for the cleavage site concordance would be 4. However, if three of the programs predicted the same cleavage site, and one program predicted a cleavage site between different amino acids, then the value would be 3.1. If all four programs predicted different cleavage site locations, then the value would be 1.1.1.1.

Table S2. Primer pair sequences and corresponding annealing temperatures for the amplification and cloning of putative *R. typhi* signal peptide sequences into *'phoA* gene fusion vectors. Nucleotides in blue indicate an introduced Sac I restriction site; nucleotides in green indicate an introduced Mfe I site, and nucleotides in red indicate an introduced BamH I restriction site.

Table S3. Quantitative, real-time PCR primer pair sequences, with corresponding annealing temperature and amplicon size. The primers were used to amplify *R. typhi* genes from a cDNA template. All primers used had an amplication efficiency ≥ 1.8 and did not generate primer dimers or nonspecific amplicons.

Table S4. *R. typhi* signal peptide predictions and 'PhoA fusion results, stratified by specific program combinations. For each possible combination of algorithms used to identify putative signal peptides, the predicted number of signal peptides, then number tested by 'PhoA fusions, and the number found to function in *E. coli* are listed.

Table S5: Gene expression of *R. typhi* extracytoplasmic proteins in HeLa cells. HeLa cells were infected with *R. typhi* at an MOI of ~10, and the bacteria were isolated for RNA extraction at 4 days post-infection. Two-step quantitative, real-time RT-PCR was used to assess gene expression of the putative *R. typhi* extracytoplasmic proteins relative to the *rpsL* gene, calculated as the relative quantity (Q) of the corresponding cDNA (see Methods and Materials for a detailed description of the calculations). "No Ct" indicates that the fluorescence level of the sample did not cross the threshold value. Results are presented for three independent infections; for each infection, gene expression was analyzed in triplicate. All primer pairs were verified to amplify the *R. typhi* sequence of interest by sequencing the PCR amplicons.

Table S1

Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0011	hypothetical protein RT0011	0	NON-CYT	Y	SSYT-AEKA [19-20]	SpI	SSYT-AEKA [19-20]	Y	SSYT-AEKA [19-20]	Y	SSYT-AEKA [19-20]	All	4	NEGATIVE
RT0013	probable zinc/manganese ABC transporter substrate binding protein (ZnuA)	0	NON-CYT	Y	TSYA-KPKI [49-50]	SpI	TSYA-KPKI [49-50]	Y	TSYA-KPKI [49-50]	Y	TSYA-KPKI [49-50]	All	4	POSITIVE
RT0015	190 kDa antigen precursor (Sca1)	1	NON-CYT	N	---	SpI	AVMA-MPVE [31-32]	Y	AVMA-MPVE [31-32]	Y	AVMA-MPVE [31-32]	L+NN+HMM	3	POSITIVE
RT0020	Bacterial leader peptidase I (LepB)	1	NON-CYT	N	---	TMH	---	Y	ILIM-EPFT [34-35]	N	---	NN	1	not tested
RT0028	VirB6-like protein of the type IV secretion system	6	NON-CYT	Y	SCTG-DTCI [21-22]	SpII	LLSS-CTGD [18-19]	Y	SSCT-GDTC [20-21]	Y	TGDT-CIDP [23-24]	All	1.1.1.1	POSITIVE
RT0029	VirB6-like protein of the type IV secretion system	5	CYT	Y	PAKA-HDTF [20-21]	SpI	PAKA-HDTF [20-21]	Y	PAKA-HDTF [20-21]	Y	PAKA-HDTF [20-21]	All	4	POSITIVE
RT0030	VirB6-like protein of the type IV secretion system	6	NON-CYT	Y	MIGA-VRIG [31-32]	SpI	AALG-MIGA [27-28]	Y	FIFA-ALGM [24-25]	Y	AALG-MIGA [27-28]	All	2.1.1	POSITIVE
RT0031	VirB6-like protein of the type IV secretion system	6	CYT	N	---	SpI	ESFA-GFGE [24-25]	Y	ESFA-GFGE [24-25]	Y	ESFA-GFGE [24-25]	L+NN+HMM	3	not tested
RT0032	VirB6-like protein of the type IV secretion system	8	NON-CYT	Y	KIHA-KDTL [28-29]	CYT	---	Y	KIHA-KDTL [28-29]	Y	KIHA-KDTL [28-29]	P+NN+HMM	3	not tested
RT0039	rickettsial conserved hypothetical protein	2	NON-CYT	Y	NVYS-INSS [21-22]	TMH	---	N	---	Y	NVYS-INSS [21-22]	P+HMM	2	NEGATIVE
RT0043	hypothetical protein RT0043	0	NON-CYT	Y	SSYS-TEKV [19-20]	SpI	SSYS-TEKV [19-20]	Y	YSTE-KVPS [21-22]	Y	SSYS-TEKV [19-20]	All	3.1	POSITIVE
RT0044	VacJ lipoprotein precursor	0	NON-CYT	Y	FARA-DLEY [18-19]	SpI	FARA-DLEY [18-19]	Y	FARA-DLEY [18-19]	Y	FARA-DLEY [18-19]	All	4	POSITIVE
RT0047	hypothetical protein RT0047	3	NON-CYT	N	---	TMH	---	Y	YLRF-VYFT [29-30]	N	---	NN	1	NEGATIVE
RT0052	190 kDa antigen precursor (Sca 2)	0	NON-CYT	Y	ESLA-SSWN [31-32]	SpI	ESLA-SSWN [31-32]	Y	ESLA-SSWN [31-32]	Y	ESLA-SSWN [31-32]	All	4	POSITIVE
RT0053	protein-export membrane protein (SecG)	1	CYT	Y	GISG-ISGD [32-33]	TMH	---	N	---	N	---	P	1	not tested
RT0055	proline/betaine transporter ProP1	12	CYT	N	---	TMH	---	Y	SSIA-NTFE [13-14]	N	---	NN	1	not tested
RT0056	hypothetical protein RT0056	9	CYT	Y	SVND-VISK [26-27]	TMH	---	N	---	N	---	P	1	POSITIVE
RT0057	OmpW-like outer membrane protein	0	NON-CYT	Y	NSHA-KNMY [20-21]	SpI	NSHA-KNMY [20-21]	Y	NSHA-KNMY [20-21]	Y	NSHA-KNMY [20-21]	All	4	POSITIVE
RT0058	NAD(P)(+) transhydrogenase (B-specific) beta subunit (PntB)	9	CYT	N	---	TMH	---	Y	QKQA-RLGS [30-31]	N	---	NN	1	not tested
RT0064	rickettsial conserved hypothetical protein	0	NON-CYT	Y	VSLA-EEKT [19-20]	SpI	VSLA-EEKT [19-20]	Y	VSLA-EEKT [19-20]	Y	VSLA-EEKT [19-20]	All	4	POSITIVE
RT0080	rickettsial conserved hypothetical protein	0	NON-CYT	Y	GCFA-NSTT [20-21]	SpII	LSTG-CFAN [17-18]	Y	GCFA-NSTT [20-21]	Y	GCFA-NSTT [20-21]	All	3.1	POSITIVE
RT0081	3-phosphatidyl-1prime-glycerol-3prime-phosphate synthase (PgsA)	5	CYT	N	---	TMH	---	Y	NSLA-RKLG [30-31]	N	---	NN	1	not tested
RT0083	hypothetical protein RT0083	5	CYT	N	---	CYT	---	Y	IFLI-KRLI [32-33]	N	---	NN	1	NEGATIVE
RT0087	cell division protein FtsH	2	CYT	N	---	TMH	---	Y	VFQS-DGLL [27-28]	Y	NVFQ-SDGL [26-27]	NN+HMM	1.1	not tested
RT0103	hypothetical protein RT0103	0	NON-CYT	Y	EVKA-QDKQ [21-22]	SpII	FLSS-CAEV [15-16]	Y	SSCA-EVKA [17-18]	Y	EVKA-QDKQ [21-22]	All	2.1.1	POSITIVE
RT0107	ATP synthase subunit B (AtpX)	1	CYT	N	---	CYT	---	Y	APNA-EEIF [35-36]	N	---	NN	1	not tested

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Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0112	protease activity modulator protein HflC	1	CYT	N	---	CYT	---	Y	SLFS-VDQR [25-26]	Y	SLFS-VDQR [25-26]	NN+HMM	2	not tested
RT0113	serine protease, HtrA/DegQ/DegS family	0	NON-CYT	Y	IILA-KENS [21-22]	CYT	---	Y	IILA-KENS [21-22]	Y	IILA-KENS [21-22]	P+NN+HMM	3	not tested
RT0117	succinate dehydrogenase (SdhA)	0	CYT	N	---	SpI	FGMA-KEGL [31-32]	N	---	N	---	L	1	not tested
RT0119	30S ribosomal protein S12 (RpsL)	0	CYT	N	---	CYT	---	Y	SKIR-KTKS [17-18]	N	---	NN	1	not tested
RT0125	50S ribosomal protein L11 (RplK)	0	CYT	N	---	SpI	PALG-QRKV [30-31]	Y	PAAG-ATPA [18-19]	N	---	L+NN	1.1	not tested
RT0136	conserved hypothetical protein (integral membrane protein)	7	NON-CYT	N	---	CYT	---	Y	GVAA-ITTI [43-44]	N	---	NN	1	POSITIVE
RT0139	glutamine-binding periplasmic protein GlnH	0	NON-CYT	Y	SCEK-KETE [18-19]	CYT	---	N	---	N	---	P	1	not tested
RT0140	aspartyl/glutamyl-tRNA amidotransferase subunit B (GatB)	0	CYT	N	---	CYT	---	Y	TLFA-ASPN [38-39]	N	---	NN	1	not tested
RT0146	multidrug resistance protein B (EmrB)	14	CYT	N	---	TMH	---	N	---	Y	MSVL-DIQI [31-32]	HMM	1	not tested
RT0150	outer membrane protein Omp1	0	NON-CYT	Y	ISFA-DDVI [24-25]	SpI	ISFA-DDVI [24-25]	Y	ISFA-DDVI [24-25]	Y	ISFA-DDVI [24-25]	All	4	POSITIVE
RT0151	probable membrane associated zinc metalloprotease	3	CYT	Y	YCIA-RYLD [26-27]	CYT	---	N	---	N	---	P	1	not tested
RT0165	post-proline cleaving enzyme (PpcE)	0	NON-CYT	Y	CIDA-MEDN [19-20]	CYT	---	N	---	N	---	P	1	not tested
RT0174	probable lipoprotein	0	NON-CYT	Y	GCKS-KKNS [22-23]	SpII	ILSG-CKSK [19-20]	Y	KKNS-NDIV [26-27]	Y	KSKK-NSND [24-25]	All	1.1.1.1	POSITIVE
RT0177	serine protease, HtrA/DegQ/DegS family	0	NON-CYT	Y	IVLA-SSDT [32-33]	SpI	IVLA-SSDT [32-33]	N	---	Y	IVLA-SSDT [32-33]	P+L+HMM	3	not tested
RT0178	rickettsial conserved hypothetical protein	0	NON-CYT	Y	SCNL-KSVY [18-19]	SpII	LMSS-CNLK [15-16]	N	---	N	---	P+L	1.1	POSITIVE
RT0182	rickettsial conserved hypothetical protein	1	CYT	N	---	CYT	---	Y	NCNT-QFIV [10-11]	N	---	NN	1	NEGATIVE
RT0187	hypothetical protein RT0187	0	NON-CYT	Y	NIYA-ATKI [21-22]	SpI	NIYA-ATKI [21-22]	Y	NIYA-ATKI [21-22]	Y	NIYA-ATKI [21-22]	All	4	POSITIVE
RT0188	rickettsial conserved hypothetical protein	0	NON-CYT	Y	FSTA-YTIK [21-22]	SpI	FSTA-YTIK [21-22]	Y	FSTA-YTIK [21-22]	Y	FSTA-YTIK [21-22]	All	4	POSITIVE
RT0199	hypothetical protein RT0199	0	CYT	N	---	CYT	---	Y	VKSA-NSNI [25-26]	N	---	NN	1	NEGATIVE
RT0216	outer membrane protein TolC precursor	0	NON-CYT	Y	SVIA-VDLE [19-20]	SpI	SVIA-VDLE [19-20]	Y	SVIA-VDLE [19-20]	Y	SVIA-VDLE [19-20]	All	4	POSITIVE
RT0218	rickettsial conserved hypothetical protein	0	NON-CYT	Y	QGYA-SPPP [23-24]	SpI	QGYA-SPPP [23-24]	Y	QGYA-SPPP [23-24]	Y	QGYA-SPPP [23-24]	All	4	POSITIVE
RT0220	tail specific periplasmic protease precursor (Ctp)	0	NON-CYT	Y	VVEG-KETE [19-20]	CYT	---	N	---	N	---	P	1	not tested
RT0222	hypothetical protein RT0222	0	NON-CYT	Y	ILQG-RPLK [22-23]	CYT	---	N	---	N	---	P	1	POSITIVE
RT0224	hypothetical protein RT0224	0	NON-CYT	Y	SCNG-LGSK [28-29]	SpII	ILIS-CNGL [25-26]	Y	ILIS-CNGL [25-26]	N	---	P+L+NN	2.1	POSITIVE
RT0235	multidrug resistance protein A (EmrA)	1	NON-CYT	N	---	TMH	---	Y	YVWA-NTQS [40-41]	N	---	NN	1	not tested
RT0242	cell division protein FtsQ	1	NON-CYT	N	---	SpI	FVFT-KYFT [49-50]	N	---	Y	FVFT-KYFT [49-50]	L+HMM	2	not tested

Table S1

Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0245	cytochrome c (CycM)	1	NON-CYT	N	---	SpI	VRFV-ANIL [26-27]	Y	RFVA-NILY [27-28]	Y	VRFV-ANIL [26-27]	L+NN+HMM	2.1	not tested
RT0247	rickettsial conserved hypothetical protein	12	CYT	N	---	TMH	---	Y	CINA-INFY [25-26]	N	---	NN	1	POSITIVE
RT0250	penicillin binding protein 4* (PbpE)	0	NON-CYT	Y	YCFA-DIQQ [44-45]	TMH	---	N	---	Y	YCFA-DIQQ [44-45]	P+HMM	2	not tested
RT0258	hypothetical protein RT0258	9	CYT	N	---	TMH	---	Y	IIFA-KDLL [33-34]	N	---	NN	1	NEGATIVE
RT0260	rickettsial conserved hypothetical protein	1	CYT	N	---	TMH	---	Y	IAVA-SLIT [32-33]	N	---	NN	1	POSITIVE
RT0261	complex III (mitochondrial electron transport) (PetA)	1	NON-CYT	N	---	TMH	---	Y	AACA-FWPI [33-34]	Y	AACA-FWPI [33-34]	NN+HMM	2	not tested
RT0263	cytochrome c1 heme protein precursor (FbcH)	1	CYT	Y	LSIA-NTEA [20-21]	SpI	LSIA-NTEA [20-21]	Y	LSIA-NTEA [20-21]	Y	LSIA-NTEA [20-21]	All	4	POSITIVE
RT0264	HSP22-like heat shock protein	0	NON-CYT	Y	IAIA-SKNY [20-21]	CYT	---	Y	IAIA-SKNY [20-21]	Y	IAIA-SKNY [20-21]	P+NN+HMM	3	not tested
RT0271	rod shape determining protein (RodA)	9	CYT	N	---	TMH	---	N	---	Y	YSAA-NSNL [35-36]	HMM	1	not tested
RT0274	NADH dehydrogenase subunit N	13	CYT	Y	SPYA-TKKD [28-29]	TMH	---	N	---	Y	YATK-KDSF [30-31]	P+HMM	1.1	not tested
RT0275	NADH dehydrogenase subunit N	13	CYT	N	---	TMH	---	N	---	Y	IIFA-RVIT [32-33]	HMM	1	not tested
RT0276	hypothetical protein RT0276	3	CYT	N	---	TMH	---	Y	TSHN-YIHK [25-26]	N	---	NN	1	POSITIVE
RT0277	probable VirB9-like conjugal transfer protein precursor (TrbG)	0	NON-CYT	Y	DVFA-LTMS [19-20]	CYT	---	N	---	Y	DVFA-LTMS [19-20]	P+HMM	2	not tested
RT0279	rickettsial conserved hypothetical protein	0	NON-CYT	Y	CTPS-APYE [23-24]	SpII	QLLS-CTPS [19-20]	Y	TPSA-PYEI [24-25]	Y	QLLS-CTPS [19-20]	All	2.1.1	POSITIVE
RT0281	VirB9 protein precursor of the type IV secretion system	0	NON-CYT	Y	TAQR-ACPV [21-22]	SpI	AQRA-CPVV [22-23]	Y	AQRA-CPVV [22-23]	Y	AQRA-CPVV [22-23]	All	3.1	POSITIVE
RT0286	rickettsial conserved hypothetical protein	0	NON-CYT	Y	LVKA-EIIE [19-20]	SpI	LVKA-EIIE [19-20]	N	---	Y	LVKA-EIIE [19-20]	P+L+HMM	3	POSITIVE
RT0287	rickettsial conserved hypothetical protein	0	NON-CYT	Y	AGYS-QIIP [22-23]	SpI	YSQI-IPTY [24-25]	Y	IAYA-GYSQ [19-20]	Y	IAYA-GYSQ [19-20]	All	2.1.1	POSITIVE
RT0291	outer membrane antigenic lipoprotein B precursor (NlpD)	0	NON-CYT	Y	CVDQ-SPAP [21-22]	SpII	CLVS-CVDQ [17-18]	N	---	Y	VSCV-DQSP [19-20]	P+L+HMM	1.1.1	POSITIVE
RT0293	translocation protein TolB precursor	0	NON-CYT	Y	TGYA-LETI [18-19]	CYT	---	Y	TGYA-LETI [18-19]	Y	TGYA-LETI [18-19]	P+NN+HMM	3	not tested
RT0296	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase (TrmU)	0	CYT	N	---	CYT	---	Y	SAVA-AMLH [18-19]	N	---	NN	1	not tested
RT0300	TolR protein	1	NON-CYT	N	---	CYT	---	Y	MLVS-GVNV [45-46]	N	---	NN	1	not tested
RT0301	rickettsial conserved hypothetical protein	1	NON-CYT	N	---	CYT	---	Y	SLLN-KKFP [37-38]	N	---	NN	1	POSITIVE
RT0305	alkaline proteinase secretion ATP-binding protein (AprD)	3	NON-CYT	N	---	TMH	---	Y	AFVI-NLLM [34-35]	N	---	NN	1	not tested
RT0312	hypothetical protein RT0312	1	NON-CYT	N	---	TMH	---	N	---	Y	GNLA-QNKT [40-41]	HMM	1	POSITIVE
RT0319	hypothetical protein RT0319	0	NON-CYT	Y	IIQM-VKVV [19-20]	CYT	---	N	---	N	---	P	1	NEGATIVE
RT0322	dTDP-4-keto-L-rhamnose reductase (RmlD)	0	NON-CYT	Y	RFLT-QDSK [21-22]	CYT	---	Y	GMLG-NSMF [13-14]	N	---	P+NN	1.1	not tested

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RT0331	probable efflux transporter	0	NON-CYT	Y	IANK-KEEE [21-22]	SpI	IANK-KEEE [21-22]	Y	STIA-NKKE [19-20]	Y	IANK-KEEE [21-22]	All	3.1	POSITIVE
RT0335	30S ribosomal protein S4 (RpsD)	0	CYT	N	---	CYT	---	Y	SLWG-DSKD [21-22]	N	---	NN	1	not tested
RT0338	rickettsial conserved hypothetical protein	1	NON-CYT	N	---	TMH	---	N	---	Y	SVLS-FMNY [24-25]	HMM	1	POSITIVE
RT0341	hypothetical protein RT0341	0	NON-CYT	Y	PLLG-NNCI [21-22]	CYT	---	N	---	N	---	P	1	POSITIVE
RT0347	hypothetical protein RT0347	9	CYT	Y	PSLG-MLTG [16-17]	TMH	---	N	---	Y	LSIA-ATVL [24-25]	P+HMM	1.1	NEGATIVE
RT0348	hypothetical protein RT0348	0	NON-CYT	Y	FVLA-ENLE [22-23]	CYT	---	N	---	N	---	P	1	POSITIVE
RT0354	apolipoprotein N-acyltransferase (Lnt)	7	CYT	N	---	TMH	---	Y	LVFA-PTFF [20-21]	Y	ALFT-FSYL [30-31]	NN+HMM	1.1	not tested
RT0355	hypothetical protein RT0355	0	NON-CYT	Y	LVYA-NQKK [27-28]	SpI	LVYA-NQKK [27-28]	Y	LVYA-NQKK [27-28]	Y	LVYA-NQKK [27-28]	All	4	POSITIVE
RT0358	rickettsial conserved hypothetical protein	4	CYT	N	---	TMH	---	N	---	Y	LSTA-YIAE [32-33]	HMM	1	POSITIVE
RT0363	proline/betaine transporter ProP3	11	CYT	Y	GLSA-NILA [27-28]	TMH	---	N	---	N	---	P	1	not tested
RT0367	CTP synthetase (PyrG)	0	NON-CYT	Y	GITA-ASLA [21-22]	CYT	---	Y	LLQA-KGFR [30-31]	N	---	P+NN	1.1	not tested
RT0377	D-alanyl-D-alanine carboxypeptidase (DacF)	0	NON-CYT	Y	ISEA-KKIV [23-24]	SpI	ISEA-KKIV [23-24]	Y	ISEA-KKIV [23-24]	Y	ISEA-KKIV [23-24]	All	4	POSITIVE
RT0379	possible periplasmic protein	0	NON-CYT	Y	AVTA-TGIV [28-29]	SpI	AVTA-TGIV [28-29]	Y	IFTA-VTAT [25-26]	Y	TAVT-ATGI [27-28]	All	2.1.1	POSITIVE
RT0382	hypothetical protein RT0382	1	NON-CYT	N	---	CYT	---	N	---	Y	YIYK-SNGS [27-28]	HMM	1	POSITIVE
RT0383	rickettsial conserved hypothetical protein	0	NON-CYT	Y	IVKL-KIYP [20-21]	CYT	---	N	---	N	---	P	1	POSITIVE
RT0384	protocatechuate oxygenase (PcaH)	0	NON-CYT	Y	NIFA-VSKI [18-19]	CYT	---	Y	NIFA-VSKI [18-19]	N	---	P+NN	2	not tested
RT0385	thiol-disulfide interchange protein (TlpA)	1	CYT	0	---	CYT	---	Y	KIQA-KLYE [28-29]	N	---	NN	1	not tested
RT0388	soluble lytic transglycosylase domain containing protein	0	NON-CYT	Y	KVNA-NSDS [19-20]	SpI	KVNA-NSDS [19-20]	Y	KVNA-NSDS [19-20]	Y	KVNA-NSDS [19-20]	All	4	POSITIVE
RT0390	carboxypeptidase IIW (LcdA)	0	NON-CYT	Y	SVFS-VSNS [20-21]	SpI	SVFS-VSNS [20-21]	Y	SVFS-VSNS [20-21]	Y	SVFS-VSNS [20-21]	All	4	POSITIVE
RT0393	hypothetical protein RT0393	1	NON-CYT	N	---	SpI	VSFA-INNY [45-46]	Y	VSFA-INNY [45-46]	Y	VSFA-INNY [45-46]	L+NN+HMM	3	POSITIVE
RT0394	signal peptidase II (LspA)	5	CYT	N	---	TMH	---	Y	SSRI-IITL [18-19]	N	---	NN	1	not tested
RT0395	rickettsial conserved hypothetical protein	0	NON-CYT	Y	ITSA-CNKK [16-17]	SpII	ITSA-CNKK [16-17]	Y	SACN-KKLK [18-19]	Y	ACNK-KLKE [19-20]	All	2.1.1	POSITIVE
RT0397	cell division protein FtsW	8	CYT	N	---	TMH	---	Y	SLML-VTTS [35-36]	Y	SIVA-SRIG [44-45]	NN+HMM	1.1	not tested
RT0398	N-acetylglucosaminyl transferase (MurG)	2	NON-CYT	Y	VALG-EELI [22-23]	CYT	---	N	---	Y	VALG-EELI [22-23]	P+HMM	2	not tested
RT0399	rickettsial conserved hypothetical protein	0	NON-CYT	Y	SSCT-DNFR [19-20]	SpII	LLSS-CTDN [17-18]	Y	TDNF-RNYF [22-23]	Y	SSCT-DNFR [19-20]	All	2.1.1	POSITIVE
RT0406	hypothetical protein RT0406	0	NON-CYT	Y	SILA-YDYP [21-22]	SpI	SILA-YDYP [21-22]	Y	SILA-YDYP [21-22]	Y	SILA-YDYP [21-22]	All	4	POSITIVE

Table S1

Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0417	hypothetical protein RT0417	0	NON-CYT	Y	VVKT-IKTY [24-25]	CYT	---	N	---	N	---	P	1	POSITIVE
RT0419	succinyl-CoA synthetase alpha subunit (SucD)	0	CYT	N	---	CYT	---	Y	QAIA-YGTN [30-31]	N	---	NN	1	not tested
RT0429	NAD(P)H-dependent glycerol-3-phosphate dehydrogenase (GpsA)	0	NON-CYT	Y	TSLA-SVVA [20-21]	SpI	TSLA-SVVA [20-21]	N	---	Y	TSLA-SVVA [20-21]	P+L+HMM	3	not tested
RT0432	NADP-thioredoxin reductase (TrxB1)	0	NON-CYT	Y	GLSA-AIYT [19-20]	SpI	GLSA-AIYT [19-20]	Y	GLSA-AIYT [19-20]	Y	GLSA-AIYT [19-20]	All	4	NEGATIVE
RT0437	ATP-dependent protease La (Lon)	0	NON-CYT	Y	SLQA-LSRT [34-35]	CYT	---	Y	GVIA-PIFV [22-23]	N	---	P+NN	1.1	not tested
RT0438	cell surface antigen Sca3	0	NON-CYT	Y	NSNA-TGAI [26-27]	SpI	NATG-AIIP [28-29]	Y	NATG-AIIP [28-29]	Y	NATG-AIIP [28-29]	All	3.1	POSITIVE
RT0443	50S ribosomal protein L36 (RpmJ)	0	CYT	N	---	CYT	---	Y	MKV-VSSL [3-4]	N	---	NN	1	not tested
RT0444	hypothetical protein RT0444	1	NON-CYT	N	---	CYT	---	N	---	Y	QIIA-DPEI [51-52]	HMM	1	POSITIVE
RT0445	rickettsial conserved hypothetical protein	0	NON-CYT	Y	KVNA-DLNH [20-21]	CYT	---	Y	KVNA-DLNH [20-21]	Y	KVNA-DLNH [20-21]	P+NN+HMM	3	POSITIVE
RT0456	probable 1-acyl-sn-glycerol-3-phosphate O-acyltransferase (PlsC)	2	CYT	N	---	TMH	---	Y	IFFL-ICYI [24-25]	N	---	NN	1	not tested
RT0459	rickettsial conserved hypothetical protein	1	CYT	Y	SGFT-FIEH [19-20]	TMH	---	N	---	N	---	P	1	NEGATIVE
RT0463	possible lipopolysaccharide 1,2-glucosyltransferase WaaJ	1	CYT	N	---	CYT	---	Y	YRMH-KNTN [30-31]	N	---	NN	1	not tested
RT0465	rickettsial conserved hypothetical protein	1	NON-CYT	N	---	TMH	---	Y	SRSI-NQKY [34-35]	Y	LVYS-GLWF [20-21]	NN+HMM	1.1	POSITIVE
RT0470	putrescine-ornithine antiporter (PotE)	12	CYT	N	---	TMH	---	Y	SVFA-LVTG [12-13]	N	---	NN	1	not tested
RT0473	cysteine desulfurase (IscS1)	0	CYT	N	---	CYT	---	Y	NQQL-KNLT [5-6]	N	---	NN	1	not tested
RT0475	rickettsial conserved hypothetical protein	5	CYT	Y	TLVR-QLLL [16-17]	CYT	---	N	---	N	---	P	1	POSITIVE
RT0491	rickettsial conserved hypothetical protein	1	NON-CYT	N	---	TMH	---	Y	YILI-QNGY [31-32]	N	---	NN	1	POSITIVE
RT0492	rickettsial conserved hypothetical protein	0	NON-CYT	Y	IASA-KDTN [26-27]	CYT	---	Y	IASA-KDTN [26-27]	Y	IASA-KDTN [26-27]	P+NN+HMM	3	POSITIVE
RT0546	hypothetical protein RT0546	0	NON-CYT	Y	QVIA-TSFN [23-24]	CYT	---	Y	QVIA-TSFN [23-24]	N	---	P+NN	2	POSITIVE
RT0547	3-hydroxyacyl-CoA dehydrogenase (FadB)	0	CYT	N	---	CYT	---	Y	SSHR-VVLL [30-31]	Y	ALIA-NSSH [25-26]	NN+HMM	1.1	not tested
RT0548	2-octaprenyl-6-methoxyphenyl hydroxylase	0	NON-CYT	Y	LSFA-QKGI [30-31]	SpI	LSFA-QKGI [30-31]	Y	LSFA-QKGI [30-31]	Y	LSFA-QKGI [30-31]	All	4	POSITIVE
RT0551	rickettsial conserved hypothetical protein	0	NON-CYT	Y	NSCS-ESTR [22-23]	SpII	LLNS-CSES [20-21]	N	---	N	---	P+L	1.1	POSITIVE
RT0554	rickettsial conserved hypothetical protein	5	CYT	N	---	TMH	---	N	---	Y	MSYK-INIQ [37-38]	HMM	1	NEGATIVE
RT0555	cell division protein FtsI/ penicillin-binding protein (FtsI2)	1	NON-CYT	N	---	CYT	---	N	---	Y	STVS-YRLI [44-45]	HMM	1	not tested
RT0561	hypothetical protein RT0561	0	NON-CYT	Y	LSYA-DQTT [19-20]	SpI	LSYA-DQTT [19-20]	Y	LSYA-DQTT [19-20]	Y	LSYA-DQTT [19-20]	All	4	POSITIVE
RT0563	rickettsial conserved hypothetical protein	0	CYT	N	---	CYT	---	Y	REQA-KEYL [20-21]	N	---	NN	1	NEGATIVE

Table S1

Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0565	protein export protein PrsA precursor	0	NON-CYT	Y	IAFC-DQDK [24-25]	SpII	SIAF-CDQD [23-24]	Y	IAFC-DQDK [24-25]	Y	SSIA-FCDQ [22-23]	All	2.1.1	POSITIVE
RT0576	Sco2-like protein	0	NON-CYT	Y	VLLS-LSTP [21-22]	CYT	---	N	---	Y	LSLS-TPKK [23-24]	P+HMM	1.1	not tested
RT0577	cytochrome c-type biogenesis protein CcmE	1	NON-CYT	N	---	CYT	---	N	---	Y	ILYN-LEKN [29-30]	HMM	1	not tested
RT0579	MviN-like protein	13	CYT	Y	RIFG-LVRE [21-22]	CYT	---	N	---	N	---	P	1	not tested
RT0582	ATP-dependent DNA helicase RecG	0	NON-CYT	Y	PVKA-FINI [16-17]	CYT	---	N	---	N	---	P	1	not tested
RT0584	D-alanine ligase (MurF)	0	NON-CYT	Y	SVNC-NAVQ [22-23]	CYT	---	N	---	N	---	P	1	not tested
RT0586	Mfd transcription-repair coupling factor (superfamily helicase II)	0	CYT	N	---	CYT	---	Y	PATA-KCFF [10-11]	N	---	NN	1	not tested
RT0591	bicyclomycin resistance protein (Bcr1)	11	CYT	Y	TIYT-SGLP [27-28]	TMH	---	Y	SPTT-ETIY [22-23]	N	---	P+NN	1.1	not tested
RT0596	50S ribosomal protein L35 (RpmI)	0	CYT	N	---	CYT	---	Y	KVIA-SQAG [24-25]	N	---	NN	1	not tested
RT0601	hypothetical protein RT0601	1	CYT	Y	TILA-IVIS [16-17]	TMH	---	N	---	N	---	P	1	POSITIVE
RT0603	nitrogen regulation protein NtrY	4	NON-CYT	N	---	TMH	---	Y	IVSA-CTTF [32-33]	Y	IVSA-CTTF [32-33]	NN+HMM	2	not tested
RT0612	zinc/manganese ABC transporter permease protein (ZnuB)	7	CYT	Y	GCIA-LWKR [22-23]	TMH	---	N	---	Y	GCIA-LWKR [22-23]	P+HMM	2	not tested
RT0619	ribonuclease PH (Rph)	0	CYT	N	---	CYT	---	Y	LIHA-EGSC [24-25]	N	---	NN	1	not tested
RT0621	possible permease	7	CYT	Y	SISS-FMLI [18-19]	TMH	---	Y	SSFM-LIPD [20-21]	N	---	P+NN	1.1	NEGATIVE
RT0628	30S ribosomal protein S11 (RpsK)	0	CYT	N	---	CYT	---	Y	ASFN-NTIV [26-27]	N	---	NN	1	not tested
RT0629	30S ribosomal protein S13 (RpsM)	0	NON-CYT	Y	STMA-AEIC [30-31]	CYT	---	N	---	N	---	P	1	not tested
RT0631	preprotein translocase SecY	10	CYT	N	---	TMH	---	Y	PIPG-IDSI [37-38]	N	---	NN	1	not tested
RT0644	50S ribosomal protein L16 (RplP)	0	NON-CYT	Y	SIDG-WRVT [39-40]	CYT	---	Y	KAKA-GMTL [23-24]	N	---	P+NN	1.1	not tested
RT0667	rickettsial conserved hypothetical protein	0	NON-CYT	Y	VAQA-SLTS [19-20]	SpI	VAQA-SLTS [19-20]	Y	VAQA-SLTS [19-20]	Y	VAQA-SLTS [19-20]	All	4	POSITIVE
RT0668	probable organic solvent tolerance protein OstA	0	NON-CYT	Y	VSFT-QQFK [18-19]	CYT	---	Y	VSFT-QQFK [18-19]	Y	VSFT-QQFK [18-19]	P+NN+HMM	3	not tested
RT0680	proline/betaine transporter ProP4	12	CYT	N	---	TMH	---	Y	PNHD-KVVA [42-43]	N	---	NN	1	not tested
RT0681	4-hydroxybenzoate octaprenyltransferase	8	CYT	N	---	CYT	---	Y	ALFG-LLLA [32-33]	Y	LLLA-NPAN [36-37]	NN+HMM	1.1	not tested
RT0684	DNA recombination protein RmuC	1	CYT	N	---	CYT	---	Y	FALI-ICFY [19-20]	N	---	NN	1	not tested
RT0691	lipid A export ATP-binding/permease protein MsbA	6	CYT	N	---	TMH	---	N	---	Y	LLIG-SVFR [38-39]	HMM	1	not tested
RT0692	rickettsial conserved hypothetical protein	0	NON-CYT	Y	PIFA-SSMQ [19-20]	SpI	PIFA-SSMQ [19-20]	Y	PIFA-SSMQ [19-20]	Y	PIFA-SSMQ [19-20]	All	4	POSITIVE
RT0693	bicyclomycin resistance protein (Bcr2)	11	CYT	Y	EILA-GSEI [14-15]	CYT	---	N	---	N	---	P	1	not tested

Table S1

Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0694	hypothetical protein RT0694	4	CYT	N	---	TMH	---	N	---	Y	IGVA-ALIV [40-41]	HMM	1	POSITIVE
RT0697	hypothetical protein RT0697	4	NON-CYT	N	---	SpI	ALFA-ATET [20-21]	Y	ALFA-ATET [20-21]	Y	ALFA-ATET [20-21]	L+NN+HMM	3	POSITIVE
RT0698	cytochrome c-type biogenesis protein CcmF	15	CYT	N	---	TMH	---	Y	TLLI-IPWI [23-24]	N	---	NN	1	not tested
RT0699	rickettsial outer membrane protein B (rOmpB/Sca5)	0	NON-CYT	Y	VAMG-AVMQ [34-35]	SpI	VAMG-AVMQ [34-35]	Y	VAMG-AVMQ [34-35]	Y	VAMG-AVMQ [34-35]	All	4	POSITIVE
RT0711	conserved hypothetical protein / possible ABC transporter substrate binding protein	1	CYT	N	---	TMH	---	Y	FAYK-TGTS [27-28]	N	---	NN	1	POSITIVE
RT0722	acetyl-CoA acetyltransferase (FadA)	0	CYT	N	---	SpI	PMLA-AHLI [31-32]	Y	PMLA-AHLI [31-32]	Y	MLAA-HLIN [32-33]	L+NN+HMM	2.1	not tested
RT0733	rickettsial conserved hypothetical protein	0	NON-CYT	Y	LASC-QIPK [23-24]	SpII	YLAS-CQIP [22-23]	Y	LYLA-SCQI [21-22]	Y	YLAS-CQIP [22-23]	All	2.1.1	POSITIVE
RT0734	twin argininte translocase protein A (TatA)	0	NON-CYT	Y	GAGK-LPQV [23-24]	CYT	---	Y	VLFG-AGKL [20-21]	N	---	P+NN	1.1	not tested
RT0740	proline/betaine transporter ProP5	12	CYT	N	---	TMH	---	Y	AIIA-NKFF [35-36]	N	---	NN	1	not tested
RT0752	guanylate kinase (Gmk)	0	NON-CYT	Y	SSLA-KELL [24-25]	SpI	SSLA-KELL [24-25]	N	---	Y	SSLA-KELL [24-25]	P+L+HMM	3	not tested
RT0756	hypothetical protein RT0756	7	CYT	N	---	TMH	---	Y	ISNI-FDLL [35-36]	N	---	NN	1	NEGATIVE
RT0758	peptidoglycan-associated lipoprotein precursor (Pal)	0	NON-CYT	Y	GCNT-TKKT [20-21]	SpII	MLVG-CNTT [17-18]	Y	TQMA-GMVN [28-29]	Y	NTTK-KTTQ [22-23]	All	1.1.1.1	POSITIVE
RT0760	50S ribosomal protein L32 (RpmF)	0	CYT	N	---	CYT	---	Y	LALG-KVNV [23-24]	N	---	NN	1	not tested
RT0761	hypothetical protein RT0761	0	NON-CYT	Y	LNSC-KTIE [22-23]	SpII	ALNS-CKTI [21-22]	Y	LAFF-ALNS [17-18]	Y	NSCK-TIEN [23-24]	All	1.1.1.1	POSITIVE
RT0763	DNA polymerase I (PolA)	0	CYT	N	---	CYT	---	Y	AYYA-QQSL [22-23]	N	---	NN	1	not tested
RT0767	rickettsial conserved hypothetical protein	0	NON-CYT	Y	LSFA-ITLT [21-22]	SpI	TVYS-VNKG [28-29]	Y	LSFA-ITLT [21-22]	Y	LSFA-ITLT [21-22]	All	3.1	POSITIVE
RT0768	murein peptide permease protein AmpG	12	CYT	N	---	TMH	---	Y	LTFN-LIFF [22-23]	Y	LTFN-LIFF [22-23]	NN+HMM	2	not tested
RT0773	rickettsial conserved hypothetical protein	0	NON-CYT	Y	NVYA-SIWD [20-21]	SpI	NVYA-SIWD [20-21]	Y	NVYA-SIWD [20-21]	Y	NVYA-SIWD [20-21]	All	4	POSITIVE
RT0775	rickettsial conserved hypothetical protein	0	NON-CYT	Y	ITFA-KEIG [21-22]	CYT	---	N	---	Y	ITFA-KEIG [21-22]	P+HMM	2	POSITIVE
RT0794	penicillin-binding protein 1A (MrcA)	1	NON-CYT	N	---	TMH	---	Y	SVTA-YIIY [24-25]	Y	SVTA-YIIY [24-25]	NN+HMM	2	not tested
RT0797	hypothetical protein RT0797	0	NON-CYT	Y	TINA-NNNK [27-28]	SpI	TINA-NNNK [27-28]	Y	TINA-NNNK [27-28]	Y	TINA-NNNK [27-28]	All	4	POSITIVE
RT0807	rickettsial conserved hypothetical protein (phosphoplipase D, Pld)	0	NON-CYT	Y	TALG-IYVE [22-23]	TMH	---	Y	TALG-IYVE [22-23]	Y	GIYV-ESTY [25-26]	P+NN+HMM	2.1	POSITIVE
RT0810	rickettsial conserved hypothetical protein	1	NON-CYT	N	---	CYT	---	Y	IAFA-FVGF [24-25]	N	---	NN	1	POSITIVE
RT0815	possible outer surface protein	0	NON-CYT	Y	ISFA-DCDI [22-23]	SpI	ISFA-DCDI [22-23]	Y	ISFA-DCDI [22-23]	Y	ISFA-DCDI [22-23]	All	4	POSITIVE
RT0816	possible outer surface protein	0	NON-CYT	Y	ISFA-ECMD [22-23]	SpI	ISFA-ECMD [22-23]	Y	ISFA-ECMD [22-23]	Y	ISFA-ECMD [22-23]	All	4	POSITIVE
RT0818	heme exporter protein C (CcmC)	6	CYT	N	---	TMH	---	Y	LYLA-LIVS [36-37]	Y	LYLA-LIVS [36-37]	NN+HMM	2	not tested

Table S1

Locus Tag	Product Name	Phobius: TM?	Phobius: Prediction	Phobius: Signal Peptide?	Phobius: Cleavage Site	LipoP Prediction	LipoP: Cleavage Site	SignalP: NN Prediction	SignalP: Cleavage Site (NN)	SignalP: HMM Prediction	SignalP: Cleavage Site (HMM)	Prediction Concordance	Cleavage Site Concordance	PhoA Assay Result
RT0821	rickettsial 17 kDa surface antigen precursor	0	NON-CYT	Y	MLQA-CNGP [19-20]	SpII	MLQA-CNGP [19-20]	Y	MLQA-CNGP [19-20]	Y	MLQA-CNGP [19-20]	All	4	POSITIVE
RT0825	hypothetical protein RT0825	0	NON-CYT	Y	CSTT-HDVA [18-19]	SpI	TTHD-VANR [20-21]	Y	HDVA-NRIK [22-23]	Y	HDVA-NRIK [22-23]	All	2.1.1	POSITIVE
RT0853	hypothetical protein RT0853	0	NON-CYT	Y	SIKA-YSNN [19-20]	SpI	KAYS-NNNI [21-22]	Y	KAYS-NNNI [21-22]	Y	KAYS-NNNI [21-22]	All	3.1	NEGATIVE
RT0858	hypothetical protein RT0858	3	CYT	N	---	TMH	---	N	---	Y	VLYK-CINQ [24-25]	HMM	1	POSITIVE
RT0860	phosphonate metabolism protein PhnP	0	NON-CYT	Y	PVIG-CECS [19-20]	CYT	---	N	---	N	---	P	1	not tested
RT0862	conserved hypothetical protein (possible transmembrane protein)	6	CYT	N	---	TMH	---	N	---	Y	TSIV-WITQ [27-28]	HMM	1	NEGATIVE
RT0866	hypothetical protein RT0866	1	NON-CYT	N	---	TMH	---	Y	TLWV-GGFC [17-18]	N	---	NN	1	NEGATIVE
RT0869	30S ribosomal protein S16 (RpsP)	0	CYT	N	---	CYT	---	Y	VVIA-NATA [23-24]	N	---	NN	1	not tested
RT0870	50S ribosomal protein L33 (RpmG)	0	CYT	N	---	CYT	---	Y	VSTA-GTGV [16-17]	N	---	NN	1	not tested

Table S2

Target Signal Sequence	Forward Primer ID	Forward Primer Sequence (5' → 3')	Reverse Primer ID	Reverse Primer Sequence (5' → 3')	Annealing Temp. (°C)
RT_0011[+]	AZ4554	TAT ATG AGC TCT ATG GAT GC	AZ4555	CTT CAA TTG AGA ACG AAT AGC	43
RT_0013	AZ4552	CCT AGT AAA TCC GAG CTC TTG GAG	AZ4553	GCT AAT ATG CTG CCA ATT GGT G	48
RT_0015[•+]	AZ4383	ATT GTA TGA GCT CCA TCA AAA G	AZ4178	GCC CAT AGC AAT TGC TTC AAC	46
RT_0028	AZ4550	CGC GTA ATA GCG AGC TCA AAT G	AZ4551	TGG TGC CAA TTG ATC ACC TTC ATG	48
RT_0029	AZ4548	CCG GAA TTA CGA GCT CGA TGA C	AZ4549	GTC CCT GCT TTA GAT CAA TTG ATT CC	48
RT_0030	AZ4546	GCG TAA GAT GGA GCT CAA CAA GG	AZ4547	GGG TTA TAC AAT TGG TTA TTG AAT CCG C	48
RT_0039[*]	AZ4713	ACT ACT GGA GCT CTA GAG G	AZ4714	CCC AAT TGA GTA CCG ATA AC	45
RT_0043	AZ4544	ATT GCA TCG AGC TCG TGA AGC	AZ4545	GGT TCT GAG ACA TCA ATT GAC GTG C	48
RT_0044	AZ4542	TTT ACT ATA TTG AGC TCA GAC G	AZ4543	TTA AAA GCA ATT GCT TTA CGG	43
RT_0047	AZ4619	GCT GTG TTA GAG CTC TGG C	AZ4620	CTT AAG GCA AGC CAA TTG TGC C	46
RT_0052	AZ4812	ATT GAG CTC CAG TAA TGA CTA TAA CAG	AZ4188	AAG TTA TTG GAT CCT TCT ATT GG	46
RT_0056[+]	AZ4715	AGA GCT CCT AAT TAA TGA ATG ATG C	AZ4716	CTA TGC AAT TGA ACA AGA ACC GG	46
RT_0057	AZ4997	GCA AGT AAG AGC TCA TCA TTA ATA TG	AZ4998	GGA TCC ATG TGT TGG CAA TCC	46
RT_0064	AZ4538	GTA CAG AGC TCA TAA TAC AAC GC	AZ4539	TTA AAG GAT CCT GTT TAA TAT AAC C	46
RT_0080[+]	AZ4536	GAA TAA GGC TTG AGC TCT ATA TGC	AZ4537	CTT CGG GTT CAA TTG TAC CTG	46
RT_0083[•*+]	AZ4717	TAA TGA GAG CTC AAA TAT GC	AZ4718	TCA GGA TCC TCG TAA TGA TG	45
RT_0103[*]	AZ4556	TTA TTG AGC TCA AAT TGA TAC ACT C	AZ4557	TGC AAT ACT CAA TTG GCT GTG	46
RT_0136	AZ4663	CAT AAT CCT GAG CTC GCT TAT G	AZ4664	GCA GAT TCA ATT GTC CGA AGC	48
RT_0150	AZ4558	CGA GAG GAG CTC GCA TTA TGA C	AZ4559	CTT TAG AAC AAT TGT AAG TTT CGC C	48
RT_0174	AZ4560	GAA TCC TTG AGC TCT TGT AAG CC	AZ4561	TTT CCC AAT TGT TCC GCT GC	48
RT_0178[*+]	AZ4665	TCA CAA GAG CTC AAT TAA CTG	AZ4666	GCC TTT GGA TCC TGA GG	45
RT_0182	AZ4667	TTG CCG AGC TCC TTC AAT TTC	AZ4668	GTC CAA TTG CTG ATA CCA TAA ATG C	46
RT_0187	AZ4562	ATT AGA GCT CAC ACT TGG TG	AZ4563	CTA CCA ATT GTT ATT ACA ACC	43
RT_0188[*]	AZ4563	TGG ATG AGC TCA AAG TGC G	AZ4565	TAC TTT AGG ATC CGT TAT GTG G	48
RT_0199	AZ5256	GGA GCT CGT TGT TAG TAA AC	AZ5458	AAG GAT CCT TAT TAA ATT TAT C	46
RT_0216	AZ4566	ATT ACG AGC TCA CAT TGC TAC	AZ4567	GAG GCA ACT GTT CAA TTG CG	48
RT_0218	AZ4568	ATT GCG AGC TCC CTT AAA TG	AZ4569	AGT ACT AGG ATC CTT ATC TTC C	48
RT_0222[•*+]	AZ4669	GTT CAT GAC GAG CTC TTC CAG	AZ4670	TCA ATT GCT GCT TTA GCA GAT C	48
RT_0224[+]	AZ4671	GAT CGA GCT CAA GCA TTG C	AZ4672	CAT TCA ATT GAT ATA CCT TTG C	46
RT_0247	AZ4673	TAC CAT GGA GCT CTG TTT AGC	AZ4674	AGC CTG CTA CAA TTG AAC C	45
RT_0258	AZ4675	TGA CTG AGC TCT CTT AAG ATG	AZ4676	CTT CGG CAA TTG CAA CAT C	45
RT_0260	AZ5294	TTT GAG CTC ATA TAT GTG GCG TG	AZ5295	CTT TGT GAT AAT GGA TCC TCC G	46
RT_0263	AZ4570	GTG TAG GAA GAG CTC ATC TAA AG	AZ4571	AGA TCA ATT GAA CTA TGG C	43
RT_0276[*]	AZ4677	CGA GCT CGC AAT ATC GG	AZ4678	AAG TAT GGA TCC CAT CTT G	45
RT_0279	AZ4572	GTA AGG AGC TCT TAA AAT AGT CAC	AZ4573	CTG ATA CAA GGA TCC ACG C	43
RT_0281	AZ4574	TTC AGA GCT CGA CAT AAA TCC CG	AZ4575	GGA TTA TAT ATA CAA TTG CTG ATC C	48
RT_0286[•+]	AZ4679	AAG AGC TCA TGT ACT ATG TGG	AZ4680	ACT TAT CTA GGA TCC TTA CTA C	45
RT_0287[+]	AZ4860	AAG TAA GAG CTC TTA TGA AAC GC	AZ4861	AAG CAG GAT CCT GAT ATC G	46
RT_0291[+]	AZ4681	ACG GAG CTC TTC TAA GAG TTG	AZ4682	GAA CTA CAA TTG CCG GAT CG	48
RT_0301[+]	AZ4683	CAT TCT GGA GCT CTT TCT CGT G	AZ4684	TTG ATG GAT CCC TCA GAG G	46
RT_0312	AZ4621	GTG AGC TCT TGA TCA ATA TTG CC	AZ5108	GAA TCA ATT GTA GCG ATT ACC	43
RT_0319	AZ4685	CAC TAG GAG CTC AAG ATG CGT G	AZ4686	GTA TGT TTG GAT CCG ACT CTT TG	46
RT_0331	AZ4578	GAT GAG GAG CTC AAA AAG CAT AC	AZ4579	TTA GCA TTA CAA TTG CGG C	48
RT_0338[+]	AZ4623	TAG AGC TCT TTA CAG ACA TG	AZ4624	CTG GAT CCA ACT TTC CAT CTT C	43
RT_0341[+]	AZ4983	GGG AGC TCG TGT TAA CGC ACC TG	AZ4984	GCC TTC AAT TGT GCC ATG TG	43
RT_0347	AZ4689	GAT GAA GAG CTC AGC CTA CTC	AZ4690	CAA AGC CAA TTG GTG GAT AC	48
RT_0348[•]	AZ4691	TGT TGA GCT CCG GTA TGG C	AZ4692	CGT TGG GAT CCT TCT TAA ATT CAG C	45
RT_0355[+]	AZ4580	GAT TTG TGA GCT CTG CTA TAT G	AZ4590	TTG CTT AAC AAT TGC AAG C	46
RT_0358	AZ4625	TGA GAG CTC GAG AAA CCA TAC C	AZ4626	TTG TCT GAC AAT TGA AGC AG	43
RT_0377	AZ4591	GTT GAG CTC TTC GCA ACA ATA C	AZ4592	GCA GGA TCA ATT GGA ACT TGG GC	46
RT_0379	AZ4593	GCT AAG AGC TCA ATA AAA TCT ATA CC	AZ4594	CTT CAA CAT CAA TTG TAG CAC C	46
RT_0382[*]	AZ4627	ATT GAG CTC GGG GTT TAG TAT G	AZ4628	TTG GCA ATT GAA CTA TAT CTG G	43
RT_0383	AZ4693	CTA TCT TTA TAG AGC TCT GCA TC	AZ4694	CTG TAC GTT CAA TTG GAT TAC C	45
RT_0388	AZ4595	TGT ATC CAC GGA GCT CAT CAT C	AZ4596	ATC TAC AAT TGC TTG TGA CAA TAC	46
RT_0390	AZ4597	GAT CAG TCA TGA GCT CGC ACA G	AZ4598	CTT TCA TAA AAC AAT TGG TAG G	43
RT_0393	AZ4629	CTT CGG AGC TCT TTT AAT G	AZ4630	CTT CTT CAC AAT TGT CCG G	43
RT_0395[+]	AZ4985	CGT AAC ACT GAG CTC GTC AG	AZ4600	CTA TTA AGC AAT TGT GAG GCG GTG	48
RT_0399	AZ4601	ATT GAG CTC ATA GCA CTT TAG TGC	AZ4602	TTT CAA TTG CCA CCT TTA GCA CC	43
RT_0406	AZ4603	TAT GAG CTC CAT CAA GCA CTC	AZ4604	TTT ATC AAT TGT ACC TCC TAC AGC	45
RT_0417	AZ4695	GGT AGA GCT CAG CAC AGT GC	AZ4696	CAA TTG TTG CCT CTT CAC	45

[•] Primers generated multiple amplicons

[*] A 1:100 dilution of the original PCR product was used as template for a second PCR with same primers

[+] Amplicon cloned into pCR4-TOPO

Table S2

Target Signal Sequence	Forward Primer ID	Forward Primer Sequence (5' → 3')	Reverse Primer ID	Reverse Primer Sequence (5' → 3')	Annealing Temp. (°C)
RT_0432[+]	AZ4856	AAG TCT TGA GCT CGG TCA C	AZ4657	CAG GAT CCT TTT CAA CGT C	46
RT_0438[+]	AZ4185	AAT CTT GGA TCC TTA CTC ACT AAC	AZ4186	CCA TTT TGG GAT CCT CCT CC	46
RT_0444[*]	AZ4631	CCT CAT AAG ATG AGC TCT GAT AAG	AZ4632	CCT GAT TCA ATT GAC GCG	45
RT_0445[+]	AZ4854	TAG CGA GCT CTA TGG AAC	AZ4698	GCA GTA CAA TTG CTC CAA G	43
RT_0459	AZ4699	TCT TCT GCG ATT AGA GCT CAA GAA C	AZ4700	GTA TTG GAT CCG GTA AAT CG	45
RT_0465[*]	AZ4701	GTG GAT AAT GAG CTC CTA CAT TG	AZ4702	CGA GCA ATT GCT GAT GAA G	45
RT_0475	AZ4719	GCA AAA TAG CAT GAG CTC ACA G	AZ4720	AAG CTA CTA TGC AAT TGA ATA TC	45
RT_0491	AZ4721	TCA TGA GCT CCT CAG AAT GGG	AZ4722	CGC ATT TCA ATT GTT ATT GAC TCC	45
RT_0492	AZ4723	CAA GAG CTC TTC AAT TAC TTC GG	AZ4724	GCA ATT GAA GTA TCG CAT TAT CG	46
RT_0546[+]	AZ4987	GAG CTC ATA ATT GAA TTG ATC	AZ4726	CTC AAT TGG AGG CTT TGC ACA CC	46
RT_0548[*+]	AZ4993	AAG TTT GAG CTC AAC AAA TGG	AZ4608	TTT ACA ATT GGG CGT TAA AG	48
RT_0551	AZ4727	AGC CTA CAT AGA GCT CCA AC	AZ4728	CCA AAC AAT TGT TTC AGG TTC AC	48
RT_0554[+]	AZ4633	TTG ATA GAG CTC AGT ACA TTA G	AZ4634	AGA CAA TTG AGG GAA TAT AAC G	46
RT_0561[+]	AZ4609	CTT ATA AGG AGC TCT TAT GC	AZ4610	GCT TGC ACA ATT GTT GTA G	46
RT_0563[+]	AZ4989	CAG AGC TCA TAG TGT ATA TGT C	AZ4730	CTT CCT ACA ACT GGA TCC CC	48
RT_0565[+]	AZ5152	TTT GAG CTC ATG TTT AAC ACA ATG	AZ5004	CCG GAT CCT GTA GTG GAA AAT C	46
RT_0601[*+]	AZ4731	TAG AGC TCA ATA TAT GCA TTA C	AZ4732	AAC CAA CCA CAA TTG CCA TG	48
RT_0621[+]	AZ4733	CAA GGA GCT CGC ATG CCT TG	AZ4734	CAG ATC AAT TGT GCT TGA TGC	46
RT_0667	AZ4613	TTT GAG CTC GAT TGT TTC G	AZ4614	AGT TGC TTA TCT GGA TCC GAA G	46
RT_0692	AZ4615	GCT TGA GAG CTC CTA TAG C	AZ4616	CTT AAC CAA TTG TAC TGA CTT GC	46
RT_0694[*]	AZ4635	ACC ATT GTA GAG CTC AAA TG	AZ4636	ATA TCC CCA ATT GAC CCG	45
RT_0697	AZ4637	ATG TAA GTA CCG GAG CTC TTA TAG G	AZ4638	AGC ACG CCA ATT GCC AGT G	43
RT_0699	AZ5732	ACT GAG CTC TGG GAA AAA ATT ATG GC	AZ5733	GCA TTT GTT GTT CAA TTG TAT TGC	48
RT_0711	AZ4735	CGC CGA GCT CGT ACG CTT G	AZ4736	TTC GGG ATC CTA CCG ACT TTG	48
RT_0733	AZ4852	CTT CAG AGC TCC CTA TTG GTG TTG	AZ4853	CCA TCA GGA TCC TGA TTT GGC	46
RT_0756	AZ4737	CCT ACG AGC TCC ACC ACA C	AZ4738	TAA CGA AGA CAA TTG AGT GAG	45
RT_0758[+]	AZ4641	ATC TCA AGG AGC TCA ATT ATG	AZ4642	CTA TCA AAA GGG ATC CAT ACA G	46
RT_0761[+]	AZ4643	GGA GCT CCC ATT ATT AGC CTC GC	AZ4644	CCG GAT CCA TAG TAG GTG TAC C	46
RT_0767	AZ4645	TGG AGC TCT ATC TGA GTA TAG AAA GC	AZ4646	GGA AAT GTA CCC AAT TGA TAA TCG G	46
RT_0773	AZ4647	CAA CGA GCT CCA AGA ATA CTC AAA GTG	AZ4648	CAT AAT GTG CCT GGT TCA ATT GGT CCT C	48
RT_0775[+]	AZ4739	CTA TTG AGC TCA ATT GCT TCC	AZ4740	TTC CCG CTA TAC ACA ATT GAT TG	46
RT_0797	AZ4649	TAG TGA GCT CGA AAT TAA TAG G	AZ4650	AAC CAA TTG TAC AGC AGA C	46
RT_0807[+]	AZ4151	GAT GCA ATT GAA ATA GCT CC	AZ4152	GCA TAT CAA TTG ATT CTT CAG C	46
RT_0810[•*]	AZ4741	TGA TCG AGC TCC GTG GTG AC	AZ4742	CTC TAA GGA TCC TGC TCG C	46
RT_0815[*]	AZ4651	GAT AGA GCT CTT ATC TAA TCT CG	AZ4652	TAC CAC TCA ATT GCT ATA GAT G	45
RT_0816[•*]	AZ4653	TTG AGC TCA TCA TCA TG	AZ4654	CCT AAA TCA ATT GGC ATA G	45
RT_0821[+]	AZ5005	AAT TCA ATG AGC TCT ATA CTT TAC	AZ5006	ACC AAT TGG TCC ACC AAG AAC	46
RT_0825	AZ4657	ATA CTG AGC TCG CTT AGT C	AZ4658	TAC AAT TGG TAG ATG ATT AGC AG	45
RT_0853	AZ4659	GTA ATC GAG CTC CTT CAG GTG	AZ4660	ACC GTA AGG ATC CTC TTG AG	45
RT_0858	AZ4661	ATG TGC TAG AGC TCT TAT CTG	AZ4662	CCC ACA TTG CCA ATT GG	45
RT_0862[+]	AZ4743	CGA GCT CAG GGC TGG AAT G	AZ4744	TAA CTG CAA TTG CTG GTA ACA G	46
RT_0866[•+]	AZ4850	CGG ATT TAT GTG AGC TCA ATG GG	AZ4851	CAA TTC AAT TGC CTC CGC CTG C	46

[•] Primers generated multiple amplicons

[*] A 1:100 dilution of the original PCR product was used as template for a second PCR with same primers

[+] Amplicon cloned into pCR4-TOPO

Table S3

Target Gene Locus Tag	Forward Primer ID	Forward Primer Sequence (5' → 3')	Reverse Primer ID	Reverse Primer Sequence (5' → 3')	Annealing Temp. (°C)	Amplicon Size
RT_0013	AZ5534	GCA GTA AAT AAT GAG TGT CC	AZ5535	TTT CTT GGT AAA ACC GTC	60	117
RT_0015	AZ4885	CAA CGA TTC CTC TGA TGC C	AZ4886	GAT GAT TTG ATG CTT ACC GTA TC	55	124
RT_0028	AZ4887	TGG TGT GGG GCT TTA TTT TC	AZ4888	CCT GCT TTC AAG AGT TGT CCT G	60	168
RT_0029	AZ4889	AAA TGC TTC AAT GGT CCC AG	AZ4890	CCT TCC TCT TTC TTC GTT ACA TC	55	141
RT_0030	AZ4891	TTA CAA GTG GTC GGT CAA GTT AG	AZ4891	GAA ACG GGT GGG CTA TTT G	60	158
RT_0043	AZ5466	GCA CGA TTA CAT TAC TAA C	AZ5467	GTT CTT ATT CCA TTT CTT CC	55	162
RT_0044	AZ4895	ATA AAA AGC GTG TGG CGG	AZ4896	TAA GAC TAA ATA AGG ACC TGG AGC	55	153
RT_0052	AZ5540	CGT CTT TTA TCA TTA GAG CAA C	AZ5541	CAG TTT GAC CAT AGG ACC C	55	130
RT_0056	AZ5176	TTG GCA AAG ATG GGT AGT GAC TG	AZ5177	CAA GCA TAG CAA ATG AAA TAG CAG C	55	128
RT_0057	AZ5178	TGA TTC CTG CGA CAC TTA CCG	AZ5179	TCC TAC TGC GTT GTA TCC GTT TC	55	143
RT_0064	AZ4899	AAA GGT TTT CAA GCA GGT ATC TC	AZ5900	GCA CTT ATC CCG TTT CTT CC	55	110
RT_0080	AZ5380	GAT GAT TTT TCT GCT TAC GC	AZ5381	GAT GAT TTT CTG TCA AGA GTT TAG G	55	202
RT_0103	AZ4901	GGC ACT CCT TCT TTC TTT GTG	AZ4902	CAT TTG CTT TTT GTC TCA TCC TC	55	107
RT_0119 (*rpsL*)	AZ4923	CTC CTG CCT TAG AAT CCA ACC C	AZ4924	TTC CTT TAC ACT ATG CTT TTC ACC AG	55	167
RT_0136	AZ4903	GGT CTT ATT ATT GCT TCA TTA GTC AAC	AZ4904	AAT CTT TGG CGT GTC CCA AG	55	120
RT_0150	AZ5544	CAA TGT CTG GTG AAT CTT TG	AZ5545	AGG TAT GAC TTT AGT AGA AAA AC	55	104
RT_0174	AZ4907	CCG ATA GCA GCG ATA AAT AG	AZ4908	ATC AGG ATA GTT GTA ACC TAA AAC	55	162
RT_0178	AZ5653	ACC TCA GAA AGC AAA GGC	AZ5654	GCT AAA TCT ATT CCT GTT CC	55	249
RT_0188	AZ5190	TGC TTT TTG TGT TTT TAG CC	AZ5191	ATC TGT TAT GTG GAT TTT CC	55	170
RT_0216	AZ5192	CGT GAT ACA GAT AGC ACC CAA GG	AZ5193	GAC CGT GAC GCT CTA AAT CCT G	55	113
RT_0218	AZ5194	TCT ATT ATT GGT GAC AGG GC	AZ5195	CAT CCT TAT CTT CCT TAT CTG G	55	101
RT_0222	AZ5196	GTA ATG CGT ATT TTT GGT ATG C	AZ5197	TCA CCT AAG GAC AGT GCT AAC	55	148
RT_0224	AZ5504	CAA AAA CGG TGA AGT AAG ATG	AZ5505	AAC AGG GGC ACA TAA AAT AC	55	100
RT_0247	AZ5548	ATA GGT TCA ATA ATA GCA G	AZ5549	TAA GTT TCC ACA CGC CC	55	276
RT_0260	AZ5655	TAT TTT GGT CGT GAA ACG	AZ5656	TCA TCT TCT AAC ACT TTT GC	55	179
RT_0263	AZ5550	GCA AAT ACA GAG GCA TTA CAT C	AZ5551	GGC AAA CAC TAC ACA CTT C	55	124
RT_0279	AZ5204	AAA GTC CGT GCG TTT CTG C	AZ5205	TAA TAG GTC TTC TGA TAC AAG G	55	75
RT_0281	AZ5554	GGT TTT ACA GCA CAA CG	AZ5555	GCA TAA GCA TCC CCA AG	55	224
RT_0286	AZ5208	GCA GGA TTT ATT AGT AGT AAC GG	AZ5209	ATT TGA CTG AAA AGA GGA GC	55	120
RT_0291	AZ5210	TTG TTT AGT TTC GTG TGT C	AZ5211	CTT TCG CTC TTC AAG TTT ATC	55	175
RT_0301	AZ5212	TGT TCT GTT TTG TAT GCC G	AZ5213	TTG CTT TGT TTG GGT TAT G	55	115
RT_0312	AZ5186	AAA GGT TTG CCA CCA GGT CC	AZ5187	TTA TTA GAA AAA TGA TGC CCA CCC	55	128
RT_0331	AZ5182	TGT CAC TTT CTA CTA TTG CG	AZ5183	GGC TAT TAT CAT TTT TAC ATT GTC C	55	129
RT_0338	AZ5556	TTA ATC ATT TCG GCA TTG C	AZ5557	ACT TTC CAT CTT CCT TTA TCG	55	102
RT_0355	AZ5562	GCA CCT AAA AAT ACG CAG	AZ5563	TAC CGA GCC TTC ATC AGA GG	55	126
RT_0358	AZ5392	ATA CTC ATA ACT ATC CTT AG	AZ5393	AAA CCT TGT GGA ATA CG	55	116
RT_0377	AZ5564	AAG CAC ATA ATG CCC AAG	AZ5565	TCT AAA GAT AAC TTA CCT GAT TC	60	103
RT_0379	AZ5396	TGG CAT TGT AGC ATC AAA AG	AZ5397	ACT CTT CCT TGC GAT ACT TC	60	144
RT_0382	AZ5398	TCG TGA AAA AAT AGT GAT GC	AZ5399	CTG TAT CTT GAT GAA AAT CTC C	55	101
RT_0383	AZ5400	CAG GGT AAA GTC CAG GTT GG	AZ5401	TTC GTG TAT CGG TAA TGA TTC	55	114
RT_0388	AZ5402	CAT TTA GAG CGG ATA GAA GAG	AZ5403	GCT TTT CAG CAT TTG ACG	55	142
RT_0390	AZ5404	GGA GTT TAC GAG GTG GTT ATG	AZ5405	TCC ATC CCC ATT CTT GTG	55	141
RT_0393	AZ5406	GCA TTT TTT TCT GAA GAT GG	AZ5407	CCG AGT ATT GGA TGT TTT CTA TTA C	55	110
RT_0399	AZ5410	CTT GTC CAA ATG CCA CAG	AZ5411	GTG TCA TCA TCA TCT TCA CG	55	148
RT_0406	AZ5412	AAG AAC AGA AAT GGG ATG AG	AZ5413	CAA TGC TGC TTG CCA GAG	55	134
RT_0417	AZ5414	TAG GGA ATC AAA ACG GTG	AZ5415	TTC TGA AGC ATC GCC AAG	60	158
RT_0438	AZ5416	ACT ACA GGC ATT GAC GGT C	AZ5417	CAC GCA AAA CAT TTA TTG TGT C	55	118
RT_0475	AZ5424	TTG TAA CAT TCT TAT TAG AGA GGA G	AZ5425	GAT TCC ACT TGA AAA CAT CAC	55	122
RT_0548	AZ5432	GAG AGT AAA CTG GTA AAA AGC C	AZ5433	CTG CTA CAA ACT GTT CAA GC	55	124
RT_0551	AZ5434	AGT TGC TCC GAA TCC ACA C	AZ5435	CAA GAA GTA AAA TCT ATC CCT G	60	203
RT_0561	AZ5576	ATG TCG CTT CTA ATC ATT CAG	AZ5577	AAA ATA CAT AGC AGA GTT GC	55	122
RT_0565	AZ5438	ACA GAT AAG ATG TTT GAT GAC G	AZ5439	TAA CCC CAC CAT TTG AAG	55	202
RT_0667	AZ5442	GCA ACT GAG TGA CTT AGC AAT C	AZ5443	AGC GTT ATC TAT CTC GTC TTG	55	100
RT_0692	AZ5671	GCT TCA GTC ACC ACA AC	AZ5672	GTT TTT GAG CAT CAG TAG C	55	145
RT_0697	AZ5448	TAT TAC CGC TTC TTC CCC	AZ5449	TTG TTC CGT TAT TAC CGA G	55	197
RT_0699	AZ5578	ATA CTA CTC CTG ATG CCG C	AZ5579	CAT TGC CAT TCT TAC TGA CC	55	114
RT_0711	AZ5450	GCA TAC AAA ACA GGG ACG	AZ5451	ACT CGC ATA AAA TCT ATC TGG	55	165
RT_0733	AZ5452	TTT AGC GTC CTG TCA AAT ACC	AZ5453	ATC CGA GCC GTC ATA AGA C	55	199
RT_0758	AZ5454	AAA AAC CAC ACA AAT GGC	AZ5455	GAA GCA CTA TCA AAA GCA AAC	55	111
RT_0761	AZ5506	CTG CCA TTA TTA GCC TCG	AZ5507	AAG TTC CGT ATC ATC TAT TGC G	55	211
RT_0773	AZ5468	GTA AGA ACA CTT CAG GTA ACG CTG C	AZ5469	GCA TTA GCA CTT GGA CAG TCT GG	55	178
RT_0775	AZ5675	CTA TTA CTT CAT TAC TAT TGG G	AZ5676	TAT TCC TAT TGC TGC TCC	55	210
RT_0797	AZ5677	TAC AAA TAG GTG GCA CAG	AZ5678	CTT CAG ATA AAG CAT CCT C	55	123
RT_0807	AZ5679	TCA GAG GGT ATT ACA GAG TAG	AZ5680	TCA CAT TCC TTC TTG AAA G	55	229
RT_0810	AZ5476	TGT CGG GTT TGG TAT CAA G	AZ5477	ATA AGG CTT TTT AGG ATT CG	55	207
RT_0815	AZ5478	CAT TTC ATT TGC TGA TTG TG	AZ5479	CCT ACA CCG ACA TTA CCA AC	55	180
RT_0816	AZ5480	CGT TTT AGT GAG CCA TAA GC	AZ5481	TGT TCT ACC ATC ATC TAT CCA G	55	277
RT_0821	AZ5690	TGG AAC ACT TCT TGG TGG C	AZ5691	GTT TTC TAT CCT GCT CAT CC	55	152
RT_0825	AZ5482	TTG AAG GAG ATG GGC ACC TCA C	AZ5483	AAA GGA GTG TAT TGA CAA GGG CG	55	142
RT_0858	AZ5584	CCA ATT AGC AAT GTG GGC AGC	AZ5585	TTC TCC GAC TTG GGT AGA CC	55	136

Table S4.

Signal peptide prediction by the following programs:				**Total unique proteins with predicted signal peptides**	**Signal peptides tested ('PhoA assay)**	**Positive signal peptides**	**Percent positive signal peptides of those tested**
Phobius	**LipoP 1.0**	**SignalP 3.0: NN**	**SignalP 3.0: HMM**				
×	×	×	×	**50**	50	47	94%
×	×	×		**1**	1	1	100%
×	×		×	**5**	2	2	100%
×		×	×	**8**	3	3	100%
×	×			**2**	2	2	100%
×		×		**9**	2	1	50%
×			×	**9**	3	1	33%
×				**22**	10	8	80%
	×	×	×	**6**	3	3	100%
	×	×		**1**	0	---	---
	×		×	**1**	0	---	---
	×			**1**	0	---	---
		×	×	**12**	1	1	100%
		×		**49**	16	8	50%
			×	**15**	9	7	78%

Table S5:

Locus Tag	Product Name	Relative Q: Infection 1	Relative Q: Infection 2	Relative Q: Infection 3	Mean Relative Quantity	Standard Deviation	Standard Error
RT0013	probable zinc/manganese ABC transporter substrate binding protein ZnuA	No Ct	No Ct	No Ct	No Ct	---	---
RT0015	190 kDa antigen precursor (Sca1)	0.011110083	0.004365913	0.059846463	0.025	0.030	0.017
RT0028	VirB6-like protein	0.005703138	0.003141588	0.003986236	0.004	0.001	0.001
RT0029	VirB6-like protein	0.079140278	0.040992969	0.121653138	0.081	0.040	0.023
RT0030	VirB6-like protein	0.002926426	0.020918305	0.004173260	0.009	0.010	0.006
RT0043	hypothetical protein	0.245562935	0.317017332	0.463361474	0.342	0.111	0.064
RT0044	VacJ lipoprotein precursor	0.107567861	1.527939398	0.406513869	0.681	0.749	0.432
RT0052	190 kDa antigen precursor (Sca2)	0.017050105	0.008980668	0.229325486	0.085	0.125	0.072
RT0056	hypothetical protein	0.010943831	0.049356039	0.154249571	0.072	0.074	0.043
RT0057	OmpW-like outer membrane protein	0.001242463	0.140881968	0.400830730	0.181	0.203	0.117
RT0064	rickettsial conserved hypothetical protein	0.638716584	2.858102683	0.585190268	1.361	1.297	0.749
RT0080	rickettsial conserved hypothetical protein	0.041814398	0.101236953	0.276188051	0.140	0.122	0.070
RT0103	hypothetical protein	0.000941951	0.529819764	0.162095313	0.231	0.271	0.157
RT0136	conserved hypothetical protein	1.799011613	0.889399786	1.214912201	1.301	0.461	0.266
RT0150	outer membrane protein Omp1	1.057665781	1.448506977	4.547502524	2.351	1.912	1.104
RT0174	probable lipoprotein	0.002394669	1.174718304	0.080919614	0.419	0.655	0.378
RT0178	rickettsial conserved hypothetical protein	0.009100271	0.020162492	0.006352933	0.012	0.007	0.004

Locus Tag	Product Name	Relative Q: Infection 1	Relative Q: Infection 2	Relative Q: Infection 3	Mean Relative Quantity	Standard Deviation	Standard Error
RT0187	hypothetical protein	(suitable primers not found)			---	---	---
RT0188	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---
RT0216	outer membrane protein TolC precursor	0.028516125	1.228208039	1.389976994	0.882	0.744	0.429
RT0218	rickettsial conserved hypothetical protein	0.001042515	0.084538709	0.062760108	0.049	0.043	0.025
RT0222	hypothetical protein	0.023319972	2.879611690	3.388108380	2.097	1.814	1.047
RT0224	hypothetical protein	0.084383773	0.156574370	0.053473193	0.098	0.053	0.031
RT0247	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---
RT0260	rickettsial conserved hypothetical protein	0.547668148	0.058169415	0.244335670	0.283	0.247	0.143
RT0263	cytochrome c1 heme protein precursor (FbcH)	0.092690670	0.071437787	No Ct	0.082	0.015	0.009
RT0276	hypothetical protein	(suitable primers not found)			---	---	---
RT0279	rickettsial conserved hypothetical protein	0.019216470	1.093064026	0.353033152	0.488	0.550	0.317
RT0281	VirB9 protein precursor	No Ct	No Ct	No Ct	No Ct	---	---
RT0286	rickettsial conserved hypothetical protein	0.018355243	2.757807188	1.985461377	1.587	1.412	0.815
RT0287	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---
RT0291	outer membrane antigenic lipoprotein B precursor (NlpD)	0.021351110	0.151997936	0.120208324	0.098	0.068	0.039
RT0301	rickettsial conserved hypothetical protein	0.038917140	0.018021874	0.069999623	0.042	0.026	0.015
RT0312	hypothetical protein	0.034368762	0.142352457	0.008944053	0.062	0.071	0.041
RT0331	probable efflux transporter	No Ct	No Ct	No Ct	No Ct	---	---
RT0338	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---

Locus Tag	Product Name	Relative Q: Infection 1	Relative Q: Infection 2	Relative Q: Infection 3	Mean Relative Quantity	Standard Deviation	Standard Error
RT0341	hypothetical protein	(suitable primers not found)			---	---	---
RT0348	hypothetical protein	(suitable primers not found)			---	---	---
RT0355	hypothetical protein	0.147739536	0.244939874	0.034762053	0.142	0.105	0.061
RT0358	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---
RT0377	D-alanyl-D-alanine carboxypeptidase (DacF)	No Ct	No Ct	No Ct	No Ct	---	---
RT0379	possible periplasmic protein	No Ct	0.001038637	0.007471753	0.004	0.005	0.003
RT0382	hypothetical protein	0.002379269	0.029409841	0.025736164	0.019	0.015	0.008
RT0383	rickettsial conserved hypothetical protein	0.002662744	0.008162949	0.044118506	0.018	0.023	0.013
RT0388	soluble lytic transglycosylase domain containing protein	0.019315221	0.014077434	0.069247085	0.034	0.030	0.018
RT0390	carboxypeptidase IIW (LcdA)	0.007601959	0.026248174	0.105327213	0.046	0.052	0.030
RT0393	hypothetical protein	0.016100393	0.016164043	0.082430462	0.038	0.038	0.022
RT0395	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---
RT0399	rickettsial conserved hypothetical protein	0.025436293	0.295025260	0.108282184	0.143	0.138	0.080
RT0406	hypothetical protein	0.055658401	0.070593178	0.288023926	0.138	0.130	0.075
RT0417	hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---
RT0438	cell surface antigen Sca3	0.039516005	0.183548161	0.055460210	0.093	0.079	0.046
RT0444	hypothetical protein	(suitable primers not found)			---	---	---
RT0445	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---
RT0465	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---
RT0475	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---
RT0491	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---

Locus Tag	Product Name	Relative Q: Infection 1	Relative Q: Infection 2	Relative Q: Infection 3	Mean Relative Quantity	Standard Deviation	Standard Error
RT0492	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---
RT0546	hypothetical protein	(suitable primers not found)			---	---	---
RT0548	2-octaprenyl-6-methoxyphenyl hydroxylase	0.074530521	0.034295094	0.672935328	0.261	0.358	0.207
RT0551	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---
RT0561	hypothetical protein	3.994727758	1.194531970	0.869289918	2.020	1.718	0.992
RT0565	protein export protein PrsA precursor	0.065640026	0.893464842	0.069143849	0.343	0.477	0.275
RT0601	hypothetical protein	(suitable primers not found)			---	---	---
RT0667	rickettsial conserved hypothetical protein	0.763460965	0.612946457	8.429749483	3.269	4.470	2.581
RT0692	rickettsial conserved hypothetical protein	10.07058689	70.20290743	6.056181354	28.777	35.932	20.746
RT0694	hypothetical protein	(suitable primers not found)			---	---	---
RT0697	hypothetical protein	0.025317437	0.227843101	0.044870397	0.099	0.112	0.064
RT0699	rickettsial outer membrane protein B (rOmpB/Sca5)	7.201565814	1.692332671	8.078805305	5.658	3.462	1.999
RT0711	conserved hypothetical protein	0.073186551	0.260091050	0.233591293	0.189	0.101	0.058
RT0733	rickettsial conserved hypothetical protein	0.010496190	0.011886574	0.141913689	0.055	0.075	0.044
RT0758	peptidogylcan-associated protein precursor (Pal)	9.694051352	21.46235940	77.74269472	36.300	36.370	20.998
RT0761	hypothetical protein	0.144178305	No Ct	No Ct	No Ct	---	---
RT0767	rickettsial conserved hypothetical protein	(suitable primers not found)			---	---	---
RT0773	rickettsial conserved hypothetical protein	No Ct	No Ct	0.020797841	---	---	---
RT0775	rickettsial conserved hypothetical protein	No Ct	No Ct	No Ct	No Ct	---	---

Locus Tag	Product Name	Relative Q: Infection 1	Relative Q: Infection 2	Relative Q: Infection 3	Mean Relative Quantity	Standard Deviation	Standard Error
RT0797	hypothetical protein	0.002530644	0.008030032	0.005577185	0.005	0.003	0.002
RT0807	phospholipase D (Pld)	No Ct	No Ct	No Ct	No Ct	---	---
RT0810	rickettsial conserved hypothetical protein	0.058940437	0.023738198	0.067277959	0.050	0.023	0.013
RT0815	possible outer surface protein	0.804070529	1.218612417	0.330314593	0.784	0.444	0.257
RT0816	possible outer surface protein	2.226559514	0.805955731	0.222351553	1.085	1.031	0.595
RT0821	rickettsial 17 kDa surface antigen precursor	2.023886716	0.231392112	0.463509139	0.906	0.975	0.563
RT0825	hypothetical protein	0.002925065	0.130717864	0.299473943	0.144	0.149	0.086
RT0858	hypothetical protein	0.030795745	0.408287763	1.341995025	0.594	0.675	0.390