

**Nucleotide sequences of primers used for MLST of *A. phagocytophilum***

<b>Gene</b>	<b>Name</b>	<b>Sequence (5' – 3')</b>	
<i>pheS</i>	pheS 1f	TCT AGG CCG CGT GTA TAT G	
	pheS 1f a	GCA TCA GAG AGA GGC AGA AT	
	pheS 1f b	ATA GAA GAT ATT TTT ATT GGG CT	
	pheS 2r	TAA CCA GTC AAT GCG ACT AC	
	pheS 2r a	AAG CCG TAA TGC CCT AAC CA	
	pheS 3f	CAC ACC TGT ACA TCA TCC AGC C	
	pheS 3f a	GTA ACA AAG GTA GTC AAG GAT	
	pheS 3f b	GGT TTG CTA CTG TTC GTG G	
	pheS 4r	CAC CCA TTC CGA AAG CAA AAC C	
	pheS 4r a	CTG AGG TCT CCA ATG TCG T	
	pheS_f	GAC GCT TTA AAY ACA CCT GTR CAT CA	
	pheS_r	CTC AAC ACC CAT TCC GAA AGC AAA	
	<i>glyA</i>	glyA 1f	GTG ATA ATG ACA GAT GAT GAG
		glyA 1f a	CGC TAA TGT TCA GCC GCA CT
glyA 2r		AAG TAT CGT ACG GCA CTA CC	
glyA 2r a		CTA GCA AGC CAA AGT ATC GT	
glyA 3f		TGT AAT AGC GGC GAA AGC GG	
glyA 3f a		CTA GGG ATG TCA TTG GAC TC	
glyA 3f b		TGT AAT AGC AGC AAA AGC AG	
glyA 4r		AGC AAC CTC TTC TCT AAC CCC C	
glyA 4r a		CGT ACG GCA CTA CCC TAA CA	
glyA_f		TAA GGT CGG CRG TAT TTC CTG G	
glyA_r		CCC TAA CAA GAG WAG CAA CYT CTT C	
<i>fumC</i>		fumC 1f	CTT ACA AGA TGC TAC TCC GT
		fumC 1f a	ACT GGC TCC GGA ACG CAG
		fumC 1f b	GCA GCA TTG ATG AGT CTG TG
	fumC 2r	GAT TCA GCG CAG TCA CCA A	
	fumC 2r a	ACA ATT CTG TCG AAC TCT TCA G	
	fumC 2r b	GTG TGA CCA TTT TGA CAG GAT	
	fumC 3f	TGT CCG TTT GTG ACA GCA GAG	
	fumC 3f a	GTG GTG AGA TAG GAA GTA AGT	
	fumC 3f b	AGA GGT TGT AGA GGG CAG AT	
	fumC 4r	TCA GCG ATG CAC CTA GCA AAG	

	fumC 4r a	GAC AAG CTT CAG GGT AAC TG
	fumC 4r b	TGC TGC ATT ATC ATA ACC GAT
	fumC_f	CTT TAC CAG CTT GCA CAA GG
	fumC_r	AGC GAT GCM CCY AGC AAA G
<i>mdh</i>	mdh 1f	GTA TTC GTA GAT GTG ATG GA
	mdh 1f a	GTG TTG CGG GTA TCT GTC A
	mdh 2r	CCA CAG CTT ATA AGG TCT GA
	mdh 2r a	TCC TCC CTT GCG AGT CCT
	mdh 3f	TGT GCC ACG GGG GAA GTT ATT G
	mdh 4r	AGG CAA CAT AAG GTC ACC GTG C
	mdh 4r a	CAC ATC CTC AGA ACT CAG AC
	mdh_f	AGG AGY TGG TAT TCG TWG ATG T
	mdh_r	GCA ACA TAA GRT CAC CRT GC
<i>sucA</i>	sucA 1f	GCT TGC TAT GGA GTA TCG TG
	sucA 1f a	GAA GCT GTG GTA GCA GTT AC
	sucA 2r	CAA ATA TTC CGC ACC TGT AG
	sucA 2r a	TTC CCA TAT CAC AAG AAC ATC
	sucA 3f	ATG AGC CTA TGT TTA CGC AGC
	sucA 3f a	AGA CGT TGT GAT AGA TGT GG
	sucA 4r	TCT TCA CCA GAT AGA CGC ACC C
	sucA 4r a	CAT GGC GGT GCG AGA AAG T
<i>dnaN</i>	dnaN 1f	AGA CAT ATC AAT AGA AGC GTG
	dnaN 1f a	GAA GCT AAG GGC TCA GTT AT
	dnaN 2r	CAA TTG ATA CAC TAT TAC CGC A
	dnaN 2r a	CGC TGA ACT TAA TAC CAA CTT A
	dnaN 3f	TAG TGG CGT GTG GAA ATG CGA G
	dnaN 3f a	TAG TGG CGT GTG GAA ATG CGC G
	dnaN 3f b	AGC GGA CGT TAG GTT CAA AC
	dnaN 4r	GTC TGG AAA CGT ACC GTC CAA C
	dnaN 4r a	ACT ACT GAT ACA CGG TCT AC
	dnaN_f	GTT AGG TTC AAA CTT AAT GAT GGC A
	dnaN_r	GGT CYA CTG CAC YCT GCA A
<i>atpA</i>	atpA 1f	CTC AAG ATT CTT AGA GAG AGA
	atpA 1f a	ATA GAG AAC TTT GGT GGT CC
	atpA 2r	ATA GCA CAA GCA GCA TAA GG

atpA 2r a	AGA AAG ATC ATC ATA TAC TAT CA
atpA 3f	ATG GAG CGG GAT TTG GAG AGA C
atpA 3f a	TAG GGG AGG TTC TTT CTG TA
atpA 4r	TTA TCC TTC TCA CTT GCC GCA C
atpA 4r a	AGT CTG ACG CAC CAG TAG C
atpA_f	ATT GCT GTA GTY TAC GGG TTG C
atpA_r	GAA GAA TTC TTC TGC CCT ATC GC