

Supplementary Data

SUPPLEMENTARY TABLE S1. PRIMERS AND TAQMAN PROBES USED FOR PATHOGEN DETECTION AND PHYLOGENETIC ANALYSIS

Pathogen	Target	Primers/probe	Product size (bp)	C/rxn (nM)	Conditions	References
<i>Anaplasma phagocytophilum</i>	<i>msp2/p44</i>	p44-F: ATG GAA GGT AGT GTT GGT TAT GGT ATT	77	300	3 min 95°C, (10 s 95°C + 45 s 60°C) × 40 cycles	Graham et al. (2018)
		p44-R: TTG GTC TTG AAG CGC TCG TA		300		
		p44-probe: HEX-TGG TGC CAG GGT TGA GCT TGA GAT TG-BHQ1		200		
<i>Borrelia</i> spp.	<i>msp4</i>	msp4-F: TAT ATC CAA CTT CAA CTT CCA CTC	93	300		
		msp4-R: CAT TCA AGT TCG CTA AGA GTT TAC		300		
		msp4-probe: HEX-CTC CGC CAA TAG CAT AGC CAG TTG-BHQ1		200		
		16S-F: AGC YTT TAA AGC TTC GCT TGT AG		600		
<i>Borrelia burgdorferi</i>	<i>16S rDNA</i>	16S-R: GCC TCC CGT AGG AGT CTG G	148	600		
		16S-probe: FAM-CCG GCC TGA GAG GGT GAW CGG-BHQ1		200		
		fliD-F: TGG TGA CAG AGT GTA TGA TAA TGG AA		400		
<i>Borrelia</i> spp.	<i>16S-18S IGS</i>	fliD-R: ACT CCT CCG GAA GCC ACA A	78	400		Hojgaard et al. (2014)
		fliD-probe: FAM-TGC TAA AAT GCT AGG AGA TTG TCT GTC GCC-BHQ1		200		
		IGS-F: CCTGAGGTCGGATGTTCAACTC		500		
<i>Borrelia</i> spp.	<i>16S-23S</i>	IGS-R: GCAAGCCGAGGGTCAAGG	Bbss: 1030	500	Rd 1: 2 min 95°C, (94°C 30 s + 63°C 30 s) × 34 cycles;	Bunikis et al. (2004)
		Round 1: 80: GTA TGT TTA GTG AGG GGG GTG		500		
		81: GGA TCA TAG CTC AGG TGG TTA G		500		
<i>Bartonella</i> spp.	<i>tmRNA (ssrA)</i>	Round 2: 82: AGG GGG GTG AAG TCG TAA CAA G	253	1000	Rd 2: 2 min 95°C (94°C 30 s + 63°C 30 s) × 39 cycles	Diaz et al. (2012)
		83: GTC TGA TAA ACC TGA GGT CGG A		1000		
		tmRNA-F: GCTATGGTAATAAATGGACAATGAAATAA		1000		
<i>Brucella</i> spp.	<i>IS711</i>	tmRNA-R: GCTTCTGTGGCAGGTG	63	200	2 min 95°C, (95°C 15 s + 60°C 60 s) × 45 cycles)	Hinic et al. (2008)
		tmRNA-probe: FAM-ACCCCGCTTAAACCTGCGCAGC-BHQ1		1000		
		IS711-F: GCTTGAAGCTTGGGACAGT		1000		
		IS711-R: GGCCTACCGCTGCGAAT		200		
		IS711-probe: HEX-AAGCCAAACACCCGGCCATTATGGT-BHQ1				

(continued)

SUPPLEMENTARY TABLE S1. (CONTINUED)

Pathogen	Target	Primers/probe	Product size (bp)	C/rxn (nM)	Conditions	References
<i>Yersinia</i> spp.	<i>pal</i>	pal-F: CGC AAA TAA TGA CCA ATC TGG	var	1000	3 min 95°C, (95°C 30 s + 66°C 30 s + 72°C 30 s) × 55 cycles);	Bai et al. (2017)
		pal-R: CGT GGC CTT CAA CAA CAA C		1000		
		pal-probe: Quasar 670 - CGG TTC TGA CTT CGC TCA AAT GCT GG-BHQ2		200		
<i>Bartonella</i> spp.	ITS	325f: CTTCAGATGATGATCCCAAGCCTTCTGGCG	770	400	Rd 1: 2 min 95°C, (95°C 30 s + 48°C 30 s + 72°C 2 min) × 40 cycles); Rd 2: 2 min 95°C, (95°C 30 s + 55°C 30 s + 72°C 2 min) × 40 cycles).	Diniz et al. (2007)
		1100r: GAACCGACGACCCCTGTGGCAAAGC		400		
		896f: GGC TAA TGA AGC AGT GAT AA		400		
		1233r: GCG ACG GTA TAC CCA TAG C		400		
		Round 1: 443f: GCTATGTCTGCATTCATCA 1210r: GATCYTCAATCATTTCTTCCCA		400		
Round 2: 781f: GGGACCAAGCTCATGGTGG 1137r: AATGCCAAAAAGAACACAGTAAACA	400					
<i>Yersinia pestis</i>	<i>pla</i>	Yp1: ATCTTACTTTCGGTGAGAAG	480	400	5 min 95°C, (1 min 95°C + 1 min 56°C + 1 min 72°C) × 35 cycles, 10 min 72°C, 4°C	Hinnebusch and Schwan (1993)
		Yp2: CTTGGATGTTGAGCTTCCTA		400		
<i>Rickettsia</i> spp.	<i>gltA</i>	CS-5: GAGAGAAAATTATATATCCAAATGTTGAT	147	225	Rd 1: 2 min 95°C, (95°C 20 s + 48°C 30 s + 60°C 2 min) × 35 cycles); Rd 2: 10 min 95°C, (94°C 30 s + 55°C 30 s + 72°C 1 min) × 30 cycles).	Labruna et al. (2004)
		CS-6: AGGGTCTTCGIGCATTTCTT		225		
<i>Rickettsia</i> spp.	<i>gltA</i>	CS-5/6: FAM-CATTGTGCCATCCAGCCTACGGT-BHQ1	381	150	Rd 1: 2 min 95°C, (95°C 20 s + 48°C 30 s + 60°C 2 min) × 35 cycles); Rd 2: 10 min 95°C, (94°C 30 s + 55°C 30 s + 72°C 1 min) × 30 cycles).	Lee et al. (2014), Regnery et al. (1991)
		Round 1: 877f: GGG GGC CTG CTC ACG GCG G		400		
		1258r: ATT GC AAA AAG TAC AGT GAA CA		400		
		Round 2: 896f: 5'- GGC TAA TGA AGC AGT GAT AA-3' 1233r: 5'- GCG ACG GTA TAC CCA TAG C-3'		400		

Supplementary References

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