Supplementary Material

**Supplementary Table 1.** Protocols and primers implemented in the study

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| Target pathogen | Primers (5’ – 3’) | Thermic profile | Reaction mixture(25 ul total volume) | Original reference |
| *B. divergens* | Gene: *18s*Forward: GTTTCTGMCCCATCAGCTTGACReverse: CAATATTAACACCACGCAAAAATTC | 40 cycles:94°C - 30”55°C - 20”72°C - 30” | PCR Master Mix: 1X Primers: 10 pmolDNA: 1 μl | (1) |
| *B. microti* | Gene: *18s*Bab1: CTTAGTATAAGCTTTTATACAGCBab4: ATAGGTCAGAAACTTGAATGATACA | 40 cycles:94°C - 30”51°C - 20”72°C - 30” | PCR Master Mix: 1X Primers: 10 pmolDNA: 1 μl | (2) |
| *A. phagocytophilum* | Gene: *groEL*EphplgroEL(569)F: ATGGTATGCAGTTTGATCGCEphplgroEL(1193)R: TCTACTCTGTCTTTGCGTTC | 40 cycles:94°C - 30”55°C - 30”72°C - 45” | HotStarTaq DNA Polymerase: 2.5 U Primers: 25 pmolDNA: 2.5 μldNTPs mix: 0.2 mM PCR buffer: 1X | (3) |
| *B. burgdorferi* s.l. | Gene:spacer region between *5S* and *23S rRNA* genes23SN1: ACCATAGACTCTTATTACTTTGAC23SC1: TAAGCTGACTAATACTAATTACCC | Touch down: 94°C - 20”60°C - 30” (-1°C every 2 cycles)72°C - 30”25 cycles:94°C - 20”50°C - 30”72°C - 30” | HotStarTaq DNA Polymerase: 2.5 U Primers: 20 pmolDNA: 2.5 μldNTPs mix: 0.2 mM PCR buffer: 1X | (4) |
| SFG *Rickettsia* | Gene:surface protein *rOmpA*190-70: ATGGCGAATATTTCTCCAAAA90-701: GTTCCGTTAATGGCAGCATCT | 40 cycles:94°C - 30”55°C - 30”72°C - 1’ | HotStarTaq DNA Polymerase: 2.5 U Primers: 7 pmolDNA: 5 μldNTPs mix: 0.2 mM PCR buffer: 1X | (5) |
| *T. capreoli* | Gene: *18s*Forward: TGTGGCTTATTTCGGTTATAAAATReverse: AAAAGCTTATTCCCGTACCCTA | 40 cycles:94°C - 30”55°C - 30” 72°C - 1’ | PCR Master Mix: 1X Primers: 25 pmolDNA: 1 μl | This paper. Reference sequence accession number: AY726011.1 |

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