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: GTTTCTGMCCCATCAGCTTGAC  Reverse: CAATATTAACACCACGCAAAAATTC | 40 cycles:  94°C - 30”  55°C - 20”  72°C - 30” | PCR Master Mix: 1X  Primers: 10 pmol  DNA: 1 μl | (1) |
| *B. microti* | Gene: *18s*  Bab1:  CTTAGTATAAGCTTTTATACAGC  Bab4: ATAGGTCAGAAACTTGAATGATACA | 40 cycles:  94°C - 30”  51°C - 20”  72°C - 30” | PCR Master Mix: 1X  Primers: 10 pmol  DNA: 1 μl | (2) |
| *A. phagocytophilum* | Gene: *groEL*  EphplgroEL(569)F: ATGGTATGCAGTTTGATCGC  EphplgroEL(1193)R:  TCTACTCTGTCTTTGCGTTC | 40 cycles:  94°C - 30”  55°C - 30”  72°C - 45” | HotStarTaq DNA Polymerase: 2.5 U  Primers: 25 pmol  DNA: 2.5 μl  dNTPs mix: 0.2 mM PCR buffer: 1X | (3) |
| *B. burgdorferi* s.l. | Gene:spacer region between *5S* and *23S rRNA* genes  23SN1: ACCATAGACTCTTATTACTTTGAC  23SC1:  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 pmol  DNA: 2.5 μl  dNTPs mix: 0.2 mM  PCR buffer: 1X | (4) |
| SFG *Rickettsia* | Gene:surface protein *rOmpA*  190-70:  ATGGCGAATATTTCTCCAAAA  90-701:  GTTCCGTTAATGGCAGCATCT | 40 cycles:  94°C - 30”  55°C - 30”  72°C - 1’ | HotStarTaq DNA Polymerase: 2.5 U  Primers: 7 pmol  DNA: 5 μl  dNTPs mix: 0.2 mM  PCR buffer: 1X | (5) |
| *T. capreoli* | Gene: *18s*  Forward: TGTGGCTTATTTCGGTTATAAAAT  Reverse: AAAAGCTTATTCCCGTACCCTA | 40 cycles:  94°C - 30”  55°C - 30”  72°C - 1’ | PCR Master Mix: 1X  Primers: 25 pmol  DNA: 1 μl | This paper. Reference sequence accession number: AY726011.1 |

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