

Aranjuez et al. 2019
SUPPLEMENTAL MATERIALS

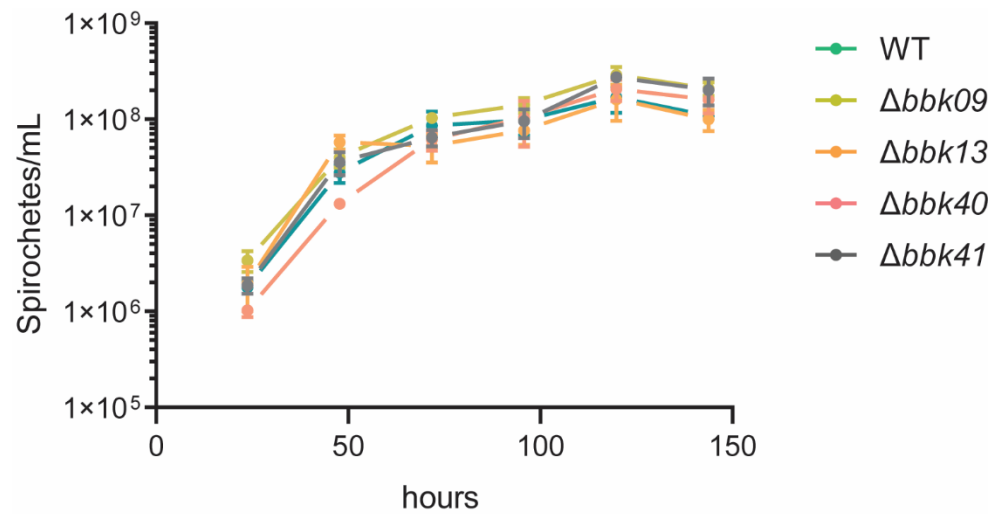


Figure S1. Targeted deletion mutants have similar *in vitro* growth curve kinetics as wild type *B. burgdorferi*. Triplicate cultures of WT, $\Delta bbk09$, $\Delta bbk13$, $\Delta bbk40$, and $\Delta bbk41$ were inoculated at 10^5 spirochetes/ml. Culture densities were determined using Petroff Hausser counting chambers every 24 hrs over a 144 hr period. Symbols and error bars represent the mean \pm SEM.

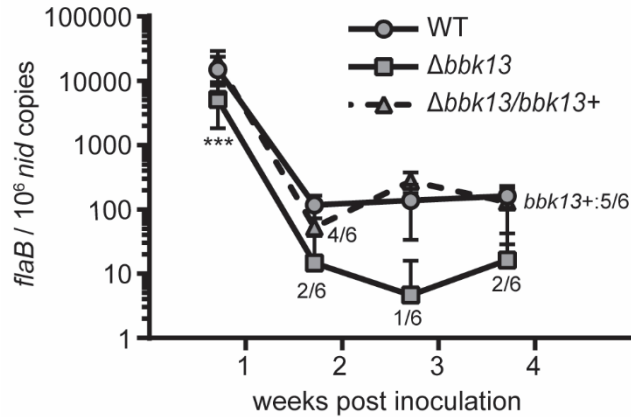


Figure S2. Spirochete loads in the skin inoculation site demonstrate a dramatic *bbk13*-independent reduction following 1 week post-inoculation. Spirochete load kinetics at the skin inoculation site were determined by qPCR at different time points post intradermal inoculation of groups of 6 C3H/HeN mice with 10^4 WT, Δ *bbk13*, or Δ *bbk13/bbk13+* *B. burgdorferi*, as described in Figure 2. The data are presented as *flaB*/ 10^6 *nid* copies. Late kinetics were determined by quantitating spirochete loads in the skin inoculation sites at week 1, 2, 3 and 4 post inoculation. Symbols and error bars represent the mean \pm standard deviation. For samples sets in which the spirochete loads in some or all of the tissues from the groups of 6 mice were below the level of detection, the number of tissues out of 6 with detectable loads are indicated. Two-way ANOVA and Tukey's multiple comparisons was used to test for statistical significance compared to WT (***, $p < 0.0001$).

Table S1. Primers and probes used this in study.

| Primer or probe no. | Designation | Sequence (5'-3') |
|---------------------|--------------------------|---|
| 1255 | flaBpaadA F | TGTCTGTCGCCTCTTGTG |
| 1256 | flaBpaadA R | TTATTTGCCGACTACCTTGGTG |
| 1987 | bbk09 left homology fwd | GGAGTATCCTTTACTTCTA |
| 1988 | bbk09 left homology rev | CGGAAGCCACAAGAGGGCGACAGACAGTTAAAAATCAAATAGTTG |
| 1989 | bbk09 right homology fwd | GGCGAGATCACCAAGGTAGTTCGGCAAATAATAGGCATTTATGAGATTTTT |
| 1990 | bbk09 right homology rev | TTGACAACATTAATTCGTAG |
| 1971 | bbk13 left homology fwd | CCACAGGCCTAAGTTC |
| 1972 | bbk13 left homology rev | GGCGAGATCACCAAGGTAGTTCGGCAAATAATATTTGGCGAACTATTTTT |
| 1973 | bbk13 right homology fwd | CGGAAGCCACAAGAGGGCGACAGACAAGATTGACCTCCTAAAAGC |
| 1974 | bbk13 right homology rev | AAAAGTTCATTCTTTTCTCC |
| 1991 | bbk40 left homology fwd | GTGTGATATAACAGAAGCAT |
| 1992 | bbk40 left homology rev | CGGAAGCCACAAGAGGGCGACAGACATAACCCTCCTTTACTGC |
| 1993 | bbk40 right homology fwd | GGCGAGATCACCAAGGTAGTTCGGCAAATAATGTAAGTGTACTTATCCAT |
| 1994 | bbk40 right homology rev | CACACTAAACCAATCTCTTA |
| 1983 | bbk41 left homology fwd | GATGAGTTTAGAAGTGGAAAT |
| 1984 | bbk41 left homology rev | GGCGAGATCACCAAGGTAGTTCGGCAAATAACTAGCACAACAATATCTTC |
| 1985 | bbk41 right homology fwd | CGGAAGCCACAAGAGGGCGACAGACAATTGTGCTTTAATCTTATCAA |
| 1986 | bbk41 right homology rev | AGCAATTATGCTCCTTTATT |
| 2156 | K13 ORF fwd | GTTGTTGTGCGACTCAATCCAAATAATAAGAAACGG |
| 2157 | K13 promoter rev | GTTGTTGTGCGACGAAATGTTAAATAATTATGTGC |
| 2335 | k13 out SacI pET28A fwd | GTTGTTGAGCTCTCAATCCAAATAATAAGAAACGG |
| 2336 | k13 out BamHI pET28A rev | GTTGTTGGATCCGGAATAAAAAACATTGGCACC |
| 2416 | K13 qPCR fwd 2 | TCGCCAAGCTTCTATCAAT |
| 2417 | K13 qPCR rev 2 | TGAGAAAATGGAAGCAGCAG |
| 1123 | recA F | AATAAGGATGAGGATTGGTG |
| 1124 | recA R | GAACCTCAAGTCTAAGAGATG |
| 1137 | flaB-taqman-FWD | TCTTTTCTCTGGTGAGGGAGCT |
| 1138 | flaB-taqman-REV | TCCTTCCTGTTGAACACCCTCT |
| 1140 | Nid-taqman-FWD | CACCCAGCTTCGGCTCAGTA |
| 1141 | Nid-taqman-REV | TCCCCAGGCCATCGGT |
| 1139 | flaB-taqman-Probe | 6-FAM-AAACTGCTCAGGCTGCACCGGTTC-TAMRA |
| 1142 | Nid-taqman-Probe | 6-FAMCGCCTTTCCTGGCTGACTTGGACA-TAMRA |