



Supplemental Figure 3. Spirochetes lacking Hk1 are acquired normally during feeding. Representative micrographs of midguts dissected from nymphs fed for 24-36 hr on C3H/HeJ mice 4 weeks following syringe-inoculation with CE162 (WT 297), *hk1* mutant (Bb508), 5A4 NP1 (WT B31), or *hk1* mutant (Bb1197). Spirochetes were detected within midguts using FITC-conjugated α -*Borrelia* antibody. A total of 8 nymphs per isolate were examined in each experiment.