

**S5 Table. OspC-encoding plasmids are retained at 21 days post-infection in Experiment 2<sup>a</sup>.**

Strain		Spirochetal burden								
		Bacteria/100ng DNA <sup>b</sup>								
		Inoculation Site			Tibiotarsus			Heart		
		Plasmid <sup>c</sup>	Chrom <sup>d</sup>	Plasmid /Chrom <sup>e</sup>	Plasmid	Chrom	Plasmid /Chrom	Plasmid	Chrom	Plasmid /Chrom
B31-A3/Vector		93.2 ±4.9	106.7 ±6.8	<b>0.87</b>	544.0 ±5.4	644.9 ±5.6	<b>0.84</b>	141.0 ±8.5	170.7± 3.6	<b>0.82</b>
B31- A3ΔospC	Vector	1.9 ±2.3	2.2 ±2.4	<b>N.A.</b> <sup>f</sup>	2.9 ±2.6	3.3 ±2.7	<b>N.A.</b>	1.9 ±2.1	2.2 ±2.6	<b>N.A.</b>
	pOspC <sub>B31</sub>	180.4 ±4.2	220.7 ±3.5	<b>0.81</b>	488.6 ±3.8	554.1 ±6.5	<b>0.89</b>	243.3 ±5.4	246.4± 2.3	<b>0.98</b>
	pOspC <sub>B31-ECM</sub>	1.9 ±2.6	4.2 ±2.4	<b>N.A.</b>	1.7 ±2.3	2.3 ±2.0	<b>N.A.</b>	2.6 ±2.3	2.4 ±2.2	<b>N.A.</b>

<sup>a</sup> Experiment displayed in Figure S4.

<sup>b</sup> Spirochetal burden determined by qPCR; shown are geometric mean ± geometric standard deviation from 10 mice.

<sup>c</sup> Spirochetal burden determined using *coIE1* primers.

<sup>d</sup> Spirochetal burden determined using *recA* primers.

<sup>e</sup> Ratio of burden determined using *coIE1* primers to burden determined using *recA* primers.

<sup>f</sup> NA, not applicable because the burdens obtained using either *recA* primers, *coIE1* primers, or both were below the detection limit of 10 bacterial copies per 100ng DNA.