

**S2 Table. Oligonucleotides<sup>#</sup>**

Primer/Vector	Sequence (5' to 3') *	Amplified DNA fragment	Reference
OspC <sub>B31</sub> pfp/pGEX4T2	cgGGATCCaaagatggaatacatct	<i>OspC<sub>B31</sub>P</i>	[1]
OspC <sub>B31</sub> prp/pGEX4T2	cgGTCGACttaaggttttttgact		[1]
OspC <sub>N40-D10/E9</sub> /pGEX4T2	cgGGATCCaaagatggaatacatct	<i>ospC<sub>N40-D10/E9</sub>P</i>	[1]
OspC <sub>N40-D10/E9</sub> /pGEX4T2	cgGTCGACttaaggttttttgact		[1]
OspC <sub>PBr</sub> pfp/pGEX4T2	cgGGATCCgattctgcatctactaat	<i>ospC<sub>PBr</sub>P</i>	[1]
OspC <sub>PBr</sub> prp/pGEX4T2	cgGTCGACttaaggttttttgagc		[1]
OspC <sub>B31-ECM</sub> pfp/pGEX4T2	cgGGATCCagtttaacaggaaaagct	<i>ospC<sub>B31-ECM</sub>P</i>	This study
OspC <sub>B31-ECM</sub> prp/pGEX4T2	cgGTCGACttccacttttgcttcat		This study
pospCfp/pBSV2G	cgGCATGCggcaaaactgaaacaagt	<i>pospC</i>	[2]
pospCrp/pBSV2G	cgGTCGACttttcctcctctatta		[2]
OspC <sub>N40-D10/E9</sub> fp/pBSV2G	cgGTCGACatgaaaaagaatacatta	<i>ospC<sub>N40-D10/E9</sub></i>	[1]
OspC <sub>N40-D10/E9</sub> rp/pBSV2G	cgGGATCCttaaggttttttgact		[1]
OspC <sub>PBr</sub> fp/pBSV2G	cgGTCGACatgaaaaagaatacatta	<i>ospC<sub>PBr</sub></i>	[1]
OspC <sub>PBr</sub> rp/pBSV2G	cgGGATCCttaaggttttttgagc		[1]
OspC <sub>B31</sub> fp/pTM61 (B2949)	tttCCTGCAGGttaatttagcatattggctt	<i>ospC<sub>B31</sub> and ospC<sub>B31-ECM</sub></i>	This study
OspC <sub>B31</sub> rp/pTM61 (B2956)	tttCCTAGGttaaggttttttgacttcc		This study
OspC <sub>B31-ECM</sub> 1	ttcagaacacatcatagccgcatcaatcattc cattaatccttcattcatcaatccatctaattttgtt ttattaggggtga	<i>ospC<sub>B31-ECM</sub></i>	This study
OspC <sub>B31-ECM</sub> 2	agatgattgatgaatgaaggattaatgaaa tgattgatgcggtatgatgttctgaaacattt actaataaattaaagaa		This study
OspC <sub>B31-ECM</sub> 3	Aattttgttttattaggggtga		This study
OspC <sub>B31-ECM</sub> 4	Cattfactaataaattaaagaa		This study
BBRecAfp	gtggatctattgtattagatgaggctctcg	<i>BbRecA</i>	[3]
BBRecArp	gccaaagtctgcaacattaacacctaag		[3]

Genfp	atgttacgcagcagcaac	gentamycin resistance cassette	[4]
Genrp	ttaggtggcggacttgg		[4]
ColE1fp	ctacatacctcgctctgctaac	pBSV2G origin of replication	[5]
ColE1rp	cgaaacccgacaggactataaa		[5]
oMCS3	tcatgagggcgccagagctcgagagagctagcagagggccctcatgaa	MCS inserted into pTM61spc (169) to generate pTM61spc-MCS	This study
oMCS4	tcatgagggccctctgctagctctctcgagctctggcgcgcctcatgaa		This study
PFlaB.Fwd	gagagctagctgtctgtcgcctcttgg	Amplification of the flagellar promoter from <i>B. burgdorferi</i> strain B31-A3 for cloning into pGEM™-T Easy (Promega corp., Madison, WI)	This study
PFlaB.Rev	gagagggccctatatcattcctccatgataaaa ttt		This study

\* The restriction sites used are shown as capital letters.

# The primers for plasmid profiling have been described [6, 7]. These primers are thus not included.

## References

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3. Liveris D, Wang G, Girao G, Byrne DW, Nowakowski J, McKenna D, et al. Quantitative detection of *Borrelia burgdorferi* in 2-millimeter skin samples of erythema migrans lesions: correlation of results with clinical and laboratory findings. *J Clin Microbiol.* 2002;40(4):1249-53.
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5. Marcinkiewicz AL, Dupuis AP, 2nd, Zamba-Campero M, Nowak N, Kraiczy P, Ram S, et al. Blood treatment of Lyme borreliae demonstrates the mechanism of CspZ-mediated complement evasion to promote systemic infection in vertebrate hosts. *Cell Microbiol.* 2019;21(2):e12998.
6. Purser JE, Norris SJ. Correlation between plasmid content and infectivity in *Borrelia burgdorferi*. *Proc Natl Acad Sci U S A.* 2000;97(25):13865-70.
7. Bunikis I, Kutschan-Bunikis S, Bonde M, Bergstrom S. Multiplex PCR as a tool for validating plasmid content of *Borrelia burgdorferi*. *J Microbiol Methods.* 2011;86(2):243-7.