

Table S3. *B. burgdorferi* strains used in this study.

Genotype	Strain (GCB)	Reference
<i>wt</i> (B31,clone 5A4)	920	Purser and Norris 2000
knockout strains		
<i>hrpA</i>	1164	Salman-Dilgimen <i>et al.</i> 2011
<i>hrpA^{R+}</i>	548	This study
	549	
D126A	572	
	573	
E127A	574	
	575	
S158A	576	
	577	
I285A	578	
	579	