

**Table S4.** Partial list of *B. burgdorferi* genes regulated based upon microarray analysis

<b>Gene Description</b>	<b>FCAbsolute</b>	<b>p-value</b>	<b>Regulation</b>
BB0242 Hypothetical protein	2.62	0.0624	down
BB0240 Glycerol uptake facilitator ( <i>glpF</i> )	2.07	0.0471	down
BB0241 Glycerol kinase ( <i>glpK</i> )	2.00	0.0750	down
BB0243 Glycerol-3-phosphate dehydrogenase, anaerobic ( <i>glpA</i> )	1.90	0.0471	down
BB0233 Ribosomal protein S20 ( <i>rpsT</i> )	1.68	0.0693	down
BB0631 Hypothetical protein	1.59	0.1321	down
BB0482 Ribosomal protein S19 ( <i>rpsS</i> )	1.59	0.0630	up
BBF26 Hypothetical protein	1.59	0.0622	up
BBF24 Hypothetical protein	1.57	0.0693	up
BBA49 Hypothetical protein	1.56	0.0471	up
BB0195 Cell division control protein 27, putative	1.56	0.0471	down
BBF28 Hypothetical protein	1.55	0.0471	up
BBA39 Hypothetical protein	1.55	0.0471	up
BBF11 Hypothetical protein	1.55	0.0495	up
BB0603 Membrane-associated protein p66	1.53	0.0503	down
BBA38 Hypothetical protein	1.53	0.0904	up
BB0424 Hypothetical protein	1.53	0.0415	down
BBA41 Hypothetical protein	1.53	0.1171	up
BB114 Hypothetical protein	1.53	0.0415	down
BBF30 Hypothetical protein	1.53	0.1240	up
BBA42 Hypothetical protein	1.52	0.0602	up
BB0799 Hypothetical protein	1.52	0.0471	down
BB0323 Hypothetical protein	1.52	0.0461	down
BB0189 50S ribosomal protein L35	1.51	0.0495	down
BBA43 Hypothetical protein	1.51	0.0396	up
BB0294 Flagellar basal-body rod protein ( <i>flgB</i> )	1.51	0.0483	down
BBF22 Protein p23, putative	1.51	0.0624	up
BB113 Hypothetical protein	1.51	0.0504	down
BB0238 Hypothetical protein	1.50	0.1384	down
BBL34 Hypothetical protein	1.50	0.0682	up
BB0188 50S ribosomal protein L20	1.50	0.0648	down
BBA35 Hypothetical protein	1.50	0.0781	up
BBA27 hypothetical protein	1.50	0.0801	up
BBA74 Outer membrane porin ( <i>oms28</i> )	1.50	0.0693	down
BBA44 Hypothetical protein	1.50	0.0584	up
BBA57 Hypothetical protein	1.49	0.0744	up
BB0426 Hypothetical protein	1.49	0.0839	down
BBA32 Hypothetical protein	1.49	0.0584	up
BBA28 Hypothetical protein	1.49	0.0415	up
BBP380 ErpA	1.49	0.1215	up
BBF27 Hypothetical protein	1.49	0.1046	up
BBA50 Hypothetical protein	1.49	0.0613	up
BB107 Hypothetical protein	1.49	0.0504	down
BBA33 Hypothetical protein	1.49	0.0317	up
BBA54 Hypothetical protein	1.48	0.1252	up
BBA45 Hypothetical protein	1.48	0.0630	up
BB0328 Oligopeptide ABC transporter ( <i>oppA-1</i> )	1.48	0.0596	down
BBA55 Hypothetical protein	1.48	0.1241	up
BBA37 Hypothetical protein	1.48	0.0504	up
BB104 Hypothetical protein	1.48	0.0657	down

<i>BB0190</i> Translation initiation factor 3 ( <i>infC</i> )	1.47	0.0478	down
<i>BBA48</i> Hypothetical protein	1.47	0.0415	up
<i>BBF23</i> Hypothetical protein	1.47	0.0580	up
<i>BBF25</i> Hypothetical protein	1.47	0.0964	up
<i>BBQ58</i> Hypothetical protein	1.46	0.0396	up
<i>BBP40</i> Hypothetical protein	1.46	0.0953	up
<i>BBA13</i> Hypothetical protein	1.46	0.0657	up
<i>BBF13</i> Hypothetical protein	1.46	0.0415	up
<i>BBA23</i> Hypothetical protein	1.46	0.0495	up
<i>BBA29</i> Hypothetical protein	1.45	0.0934	up
<i>BBP39</i> ErpB	1.45	0.0682	up
<i>BB0148</i> Hypothetical protein	1.45	0.1471	down
<i>BBA36</i> Lipoprotein	1.45	0.1416	up
<i>BBQ62</i> Hypothetical protein	1.45	0.0569	up
<i>BBA56</i> Hypothetical protein	1.45	0.0451	up
<i>BBA04</i> Antigen, S2	1.44	0.0938	up
<i>BBF01</i> ErpD protein, putative	1.44	0.1237	up
<i>BBQ57</i> Hypothetical protein	1.44	0.0560	up
<i>BBN41</i> Hypothetical protein	1.44	0.0471	up
<i>BBA70</i> Hypothetical protein	1.44	0.0982	up
<i>BBA11</i> Hypothetical protein	1.43	0.0504	up
<i>BBA60</i> Surface lipoprotein P27	1.43	0.0504	up
<i>BB0650</i> Hypothetical protein	1.43	0.0471	down
<i>BBL32</i> Plasmid partition protein, putative	1.43	0.0711	up
<i>BBA51</i> Hypothetical protein	1.43	0.0780	up
<i>BB0559</i> Glucose-specific PTS system enzyme IIA component	1.43	0.0630	down
<i>BBL35</i> BdrO	1.43	0.0780	up
<i>BBA47</i> Hypothetical protein	1.42	0.0577	up
<i>BBF03</i> Hypothetical protein	1.42	0.0471	up
<i>BBA21</i> Hypothetical protein	1.42	0.0577	up
<i>BBI11</i> Hypothetical protein	1.42	0.0528	down
<i>BBF14</i> Hypothetical protein	1.42	0.0908	up
<i>BB0024</i> Hypothetical protein	1.42	0.0648	down
<i>BBA24</i> Decorin binding protein A ( <i>dbpA</i> )	1.42	0.0495	up
<i>BBA46</i> Hypothetical protein	1.42	0.0951	up
<i>BBA58</i> Hypothetical protein	1.42	0.0730	up
<i>BBP26</i> Hypothetical protein	1.42	0.1067	up
<i>BBF17</i> Hypothetical protein	1.42	0.1032	up
<i>BBF09</i> Hypothetical protein	1.42	0.0463	up
<i>BBI23</i> Hypothetical protein	1.41	0.0661	down
<i>BBA10</i> Hypothetical protein	1.41	0.0995	up
<i>BBI21</i> Hypothetical protein	1.41	0.0471	down
<i>BBA40</i> Hypothetical protein	1.41	0.0415	up
<i>BB0800</i> Transcription elongation factor NusA	1.41	0.0452	down
<i>BBK36</i> Hypothetical protein	1.41	0.0517	up
<i>BBA69</i> Hypothetical protein	1.41	0.0463	up
<i>BBI08</i> Hypothetical protein	1.41	0.0920	down
<i>BBA52</i> Outer membrane protein	1.40	0.0681	up
<i>BBA53</i> Hypothetical protein	1.40	0.0951	up

FCAbsolute (Fold Change Absolute) is the fold change between average of normalized data of *hrpA* mutant and complemented mutant. Regulation is given as the direction of fold change.