

**Table S1. NCBI and PATRIC accession numbers for *Rickettsia* Pat1 and Pat2 sequences.****Pat1 sequences**

<b>Taxon</b>	<b>NCBI</b>	<b>PATRIC</b>
<i>Rickettsia bellii</i> RML369-C	YP_538013 YP_538012	VBIRicBel102610_0959 VBIRicBel102610_0958
<i>Rickettsia bellii</i> OSU 85-389	YP_001495950	VBIRicBel35792_0564
<i>Rickettsia canadensis</i> McKiel	YP_001492093	VBIRicCan89738_0393
<i>Rickettsia canadensis</i> CA410	YP_005299400	VBIRicCan238964_0359
<i>Rickettsia helvetica</i> C9P9		VBIRicHel217856_0676
<i>Rickettsia felis</i> URRWXCal2 pRF	YP_246376 YP_247427	VBIRicFel64634_0421 VBIRicFel64634_1695
<i>Rickettsia australis</i> Cutlack	YP_005414840	VBIRicAus231019_0707
<i>Rickettsia akari</i> Hartford	YP_001493712	VBIRicAka50705_0974
<i>Rickettsia typhi</i> Wilmington	YP_067537	VBIRicTyp34752_0611
<i>Rickettsia prowazekii</i> GvV257	YP_005405102	VBIRicPro231244_0891
<i>Rickettsia prowazekii</i> Madrid E	NP_220970	VBIRicPro72556_0620
<i>Rickettsia</i> endosymbiont of <i>Ixodes scapularis</i>	ZP_04699958	VBIRicEnd40569_1815
<i>Candidatus</i> <i>Rickettsia amblyommii</i> GAT-30V pMCE_1	YP_005365687 YP_005353138	
<i>Rickettsia rhipicephali</i> 3-7-female6-CWPP	YP_005390723	VBIRicRhi233851_1199
<i>Rickettsia massiliae</i> MTU5	YP_001499568	VBIRicMas83254_1188
<i>Rickettsia massiliae</i> AZT80	YP_005301963	VBIRicMas238520_0724
<i>Rickettsia montanensis</i> OSU 85-930	YP_005391357	VBIRicMon232555_0371
<i>Rickettsia japonica</i> YH	YP_004885050	VBIRicJap83739_1100
<i>Rickettsia heilongjiangensis</i> 054	YP_004764600	VBIRicHei193551_1060
<i>Rickettsia slovaca</i> 13-B	YP_005066035	VBIRicSlo180092_1103
<i>Rickettsia conorii</i> subsp. <i>indica</i> ITTR		VBIRicCon229600_1196
<i>Rickettsia conorii</i> Malish 7	NP_360559	VBIRicCon45613_1049
<i>Rickettsia parkeri</i> Portsmouth	YP_005393160	VBIRicPar233447_1088
<i>Rickettsia africae</i> ESF-5	YP_002845446	VBIRicAfr6986_1031
<i>Rickettsia sibirica</i> subsp. <i>mongolitimonae</i> HA-91		VBIRicSib225156_1146

<b>Taxon</b>	<b>NCBI</b>	<b>PATRIC</b>
<i>Rickettsia sibirica</i> 246	ZP_00142926	VBIRicSib27963_1309
<i>Rickettsia peacockii</i> Rustic	YP_002916515	VBIRicPea48268_0721 VBIRicPea48268_0720
<i>Rickettsia philipii</i> 364D	YP_005301006	VBIRicPhi124131_1077
<i>Rickettsia rickettsii</i> Hlp#2	YP_005295628	VBIRicRic236174_1074
<i>Rickettsia rickettsii</i> Sheila Smith	YP_001495020	VBIRicRic5337_1062

### **Pat2 sequences**

<b>Taxon</b>	<b>NCBI</b>	<b>PATRIC</b>
<i>Rickettsia bellii</i> RML369-C	YP_538517	VBIRicBel102610_1347
<i>Rickettsia bellii</i> OSU 85-389	YP_001495691	VBIRicBel35792_0274
<i>Rickettsia helvetica</i> C9P9		VBIRicHel217856_0986
<i>Rickettsia typhi</i> Wilmington	YP_067473	VBIRicTyp34752_0547
<i>Rickettsia prowazekii</i> GvV257	YP_005413959	VBIRicPro237744_0530
<i>Rickettsia prowazekii</i> Madrid E	NP_220907	VBIRicPro72556_0544
<i>Candidatus Rickettsia amblyommii</i> GAT-30V	YP_005365402	
<i>Rickettsia rhipicephali</i> 3-7-female6-CWPP	YP_005390510	VBIRicRhi233851_0919
<i>Rickettsia massiliae</i> MTU5	YP_001499395	VBIRicMas83254_0848
<i>Rickettsia massiliae</i> AZT80	YP_005302159	VBIRicMas238520_0975
<i>Rickettsia montanensis</i> OSU 85-930	YP_005391134	VBIRicMon232555_0111