Figure S2: Alignment of RapL orthologs in representative rickettsial species (CLUSTAL O(1.2.4) multiple sequence alignment)

```
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia rickettsii_Sheila_Smith_rapL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia rickettsii_Iowa_RRIOWA_1520                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia bellii_strain_AN04_A3306_01190                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia asembonensis_NMRCii_SB78_05065                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia felis_LSU-lb_JS61_07240                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia aeschlimannii_fig|45262.5.peg.639                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia philipii_str._364_DRSA_07150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia peacockii_str._Rustic_RPR_05010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia japonica_strain_M99023_fig|35790.8.peg.1490                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia heilongjiangensis_054_Rh054_07045                                                                                                                                                                                                                                                                                                
Rickettsia montanensis_str._OSU_85-930_MCI_03760                                                                                                                                                                                                                                                
Rickettsia gravesii_BWI-1_fig|1397702.5.peg.1673                                                                                                                                                                                                
Rickettsia africae_ESF-5_RAF_ORF1188                                                                                                                                                                
Rickettsia parkeri_str._Portsmouth_MC1_07155                                                                                                                                
Rickettsia sibirica_246_rsib_orf.797                                                                                                                
Rickettsia honei_RB_fig|1175313.3.peg.959                                                                                                
Rickettsia conorii_Malish_7_RC1296                                                                                                
Rickettsia australis_Cutlack_MC5_01330_correctedstart                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia akari_str._Hartford_A1C_06475                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia sp_Tillamook_23_H6P87_01312                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia asiatica_Maytaro1284_RAS_14400_correctedstart                                                                                                                                                                                                                                                                                                                                                
Rickettsia helvetica_C9P9_fig|1144888.4.peg.238                                                                                                                                                                                                                                                                                                
Rickettsia monacensis_IrR|Munich_RMONA_01190                                                                                                                                                                                                                                                                                                
Rickettsia tamurae_strain_AT-1_fig|334545.3.peg.912                                                                                                                                                                                                                                                                                                
Rickettsia typhi_TH1527_RTTH1527_03965                                                                                                                                                                                                                                                                                                
Rickettsia prowazekii_Chernikova_M9W_04060                                                                                                                                                                                                                                                                                                
```

```
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia rickettsii_Sheila_Smith_rapL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia rickettsii_Iowa_RRIOWA_1520                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia bellii_strain_AN04_A3306_01190                                                                                                                                                                                                                                                                                                
Rickettsia asembonensis_NMRCii_SB78_05065                                                                                                                                                                                                                                                                                                
Rickettsia felis_LSU-lb_JS61_07240                                                                                                                                                                                                                                                                                                
Rickettsia aeschlimannii_fig|45262.5.peg.639                                                                                                                                                                                                                                                                                                
Rickettsia philipii_str._364_DRSA_07150                                                                                                                                                                                                                                                                                                
Rickettsia peacockii_str._Rustic_RPR_05010                                                                                                                                                                                                                                                                                                
Rickettsia japonica_strain_M99023_fig|35790.8.peg.1490                                                                                                                                                                                                                                                                                                
Rickettsia heilongjiangensis_054_Rh054_07045                                                                                                                                                                                                                                                                                                
Rickettsia montanensis_str._OSU_85-930_MCI_03760                                                                                                                                                                                                                                                                                                
Rickettsia gravesii_BWI-1_fig|1397702.5.peg.1673                                                                                                                                                                                                                                                                                                
Rickettsia africae_ESF-5_RAF_ORF1188                                                                                                                                                                                                                                                                                                
Rickettsia parkeri_str._Portsmouth_MC1_07155                                                                                                                                                                                                                                                                                                
Rickettsia sibirica_246_rsib_orf.797                                                                                                                                                                                                                                                                                                
Rickettsia honei_RB_fig|1175313.3.peg.959                                                                                                                                                                                                                                                                                                
Rickettsia conorii_Malish_7_RC1296                                                                                                                                                                                                                                                                                                
Rickettsia australis_Cutlack_MC5_01330_correctedstart                                                                                                                                                                                                                                                                                                
Rickettsia akari_str._Hartford_A1C_06475                                                                                                                                                                                                                                                                                                
Rickettsia sp_Tillamook_23_H6P87_01312                                                                                                                                                                                                                                                                                                
Rickettsia asiatica_Maytaro1284_RAS_14400_correctedstart                                                                                                                                                                                                                                                                                                
Rickettsia helvetica_C9P9_fig|1144888.4.peg.238                                                                                                                                                                                                                                                                                                
Rickettsia monacensis_IrR|Munich_RMONA_01190                                                                                                                                                                                                                                                                                                
Rickettsia tamurae_strain_AT-1_fig|334545.3.peg.912                                                                                                                                                                                                                                                                                                
Rickettsia typhi_TH1527_RTTH1527_03965                                                                                                                                                                                                                                                                                                
Rickettsia prowazekii_Chernikova_M9W_04060                                                                                                                                                                                                                                                                                                
```

```
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
Rickettsia rickettsii_Sheila_Smith_rapL                                                                                                                                                                                                                                                                                                
Rickettsia rickettsii_Iowa_RRIOWA_1520                                                                                                                                                                                                                                                                                                
Rickettsia bellii_strain_AN04_A3306_01190                                                                                                                                                                                                                                                                                                
Rickettsia asembonensis_NMRCii_SB78_05065                                                                                                                                                                                                                                                                                                
Rickettsia felis_LSU-lb_JS61_07240                                                                                                                                                                                                                                                                                                
Rickettsia aeschlimannii_fig|45262.5.peg.639                                                                                                                                                                                                                                                                                                
Rickettsia philipii_str._364_DRSA_07150                                                                                                                                                                                                                                                                                                
Rickettsia peacockii_str._Rustic_RPR_05010                                                                                                                                                                                                                                                                                                
Rickettsia japonica_strain_M99023_fig|35790.8.peg.1490                                                                                                                                                                                                                                                                                                
Rickettsia heilongjiangensis_054_Rh054_07045                                                                                                                                                                                                                                                                                                
Rickettsia montanensis_str._OSU_85-930_MCI_03760                                                                                                                                                                                                                                                                                                
Rickettsia gravesii_BWI-1_fig|1397702.5.peg.1673                                                                                                                                                                                                                                                                                                
Rickettsia africae_ESF-5_RAF_ORF1188                                                                                                                                                                                                                                                                                                
Rickettsia parkeri_str._Portsmouth_MC1_07155                                                                                                                                                                                                                                                                                                
Rickettsia sibirica_246_rsib_orf.797                                                                                                                                                                                                                                                                                                
Rickettsia honei_RB_fig|1175313.3.peg.959                                                                                                                                                                                                                                                                                                
Rickettsia conorii_Malish_7_RC1296                                                                                                                                                                                                                                                                                                
Rickettsia australis_Cutlack_MC5_01330_correctedstart                                                                                                                                                                                                                                                                                                
Rickettsia akari_str._Hartford_A1C_06475                                                                                                                                                                                                                                                                                                
Rickettsia sp_Tillamook_23_H6P87_01312                                                                                                                                                                                                                                                                                                
Rickettsia asiatica_Maytaro1284_RAS_14400_correctedstart                                                                                                                                                                                                                                                                                                
Rickettsia helvetica_C9P9_fig|1144888.4.peg.238                                                                                                                                                                                                                                                                                                
Rickettsia monacensis_IrR|Munich_RMONA_01190                                                                                                                                                                                                                                                                                                
Rickettsia tamurae_strain_AT-1_fig|334545.3.peg.912                                                                                                                                                                                                                                                                                                
Rickettsia typhi_TH1527_RTTH1527_03965                                                                                                                                                                                                                                                                                                
Rickettsia prowazekii_Chernikova_M9W_04060                                                                                                                                                                                                                                                                                                
```