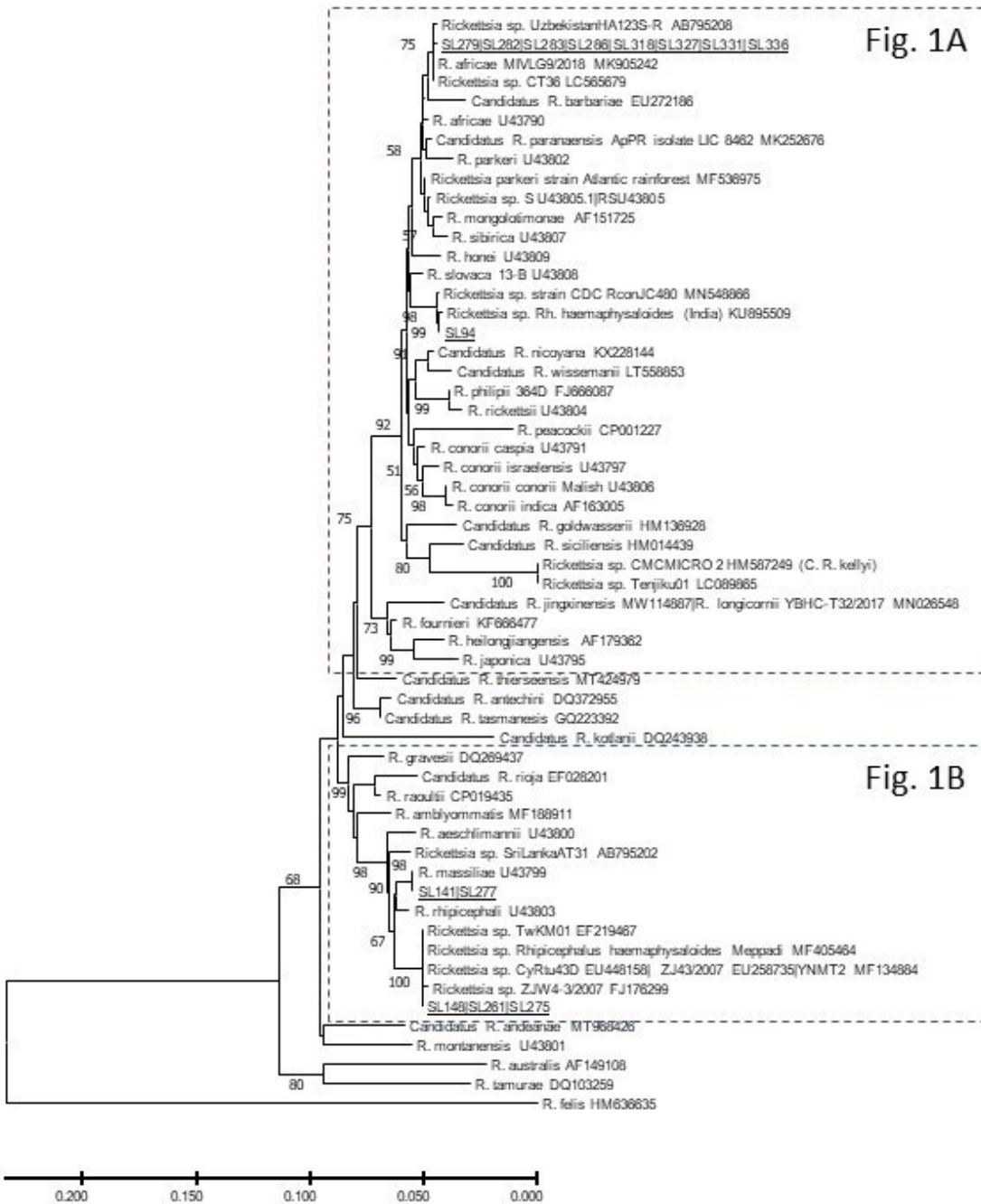


Supplemental Figure 1: OmpA tree with all SFG *Rickettsia*



Supplemental Figure 1: OmpA gene fragment genetic relationship of SFG *Rickettsia* detected in ticks from Sri Lanka. Frames indicated by broken lines correspond to Figure 1A and Figure 1B shown in the main part of the manuscript. Samples of Sri Lankan ticks are indicated by letters SL and corresponding tick number and are underlined.

The evolutionary history was inferred using the Neighbor-Joining method computed using the Kimura 2-parameter method in MEGA X.³⁸ This analysis involved 56 nucleotide sequences. There were a total of 540 positions in the final dataset.

Supplemental Figure 2. Comparisons of SL154 and SL94 with their closest gene sequences

Part A. SL154 sequence comparisons to Candidatus Rickettsia kellyi-related sequences

ompA alignment

ompA_Tenjiku01_LC089865.1 sequence that matches ompA_Tenjiku01_NZ_BCMR01000011.1_21-1028 (100%) is underlined

```
ompA_Rkellyi_DQ080005.1 -----  
ompA_Tenjiku01_NZ_BCMR01000011 ATGGCGAATATTTCTCCAAAATTATTTCAAAAAGCAATACAACAAGGTCT  
ompA_CMCMICRO2_HM587249.1 -TGGCGAATATTTCTCCAAAATTATTTCAAAAAGCAATACAACAAGGTCT  
ompA_Rsiciliensis_HM014439.1 -----GCAATACAACAAGGTCT  
ompA_SL154 -----  
*****
```

```
ompA_Rkellyi_DQ080005.1 -----TGCAGCCGAAATATGCTGAGTAGT  
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ompA_CMCMICRO2_HM587249.1 TAAAGCCGCTTTATTCACCACCTCAACCGCAGC-GATAATGCTGAGTAGT  
ompA_Rsiciliensis_HM014439.1 TAAAGCCGCTTTATTCACCACCTCAACCGCAGC-GATAATGCTGAGTAGT  
ompA_SL154 -----  
*****
```

```
ompA_Rkellyi_DQ080005.1 AGCGGGGCACTCGGTGTTGCTGCAGGTGTTATTGCTACTAATAATAATG  
ompA_Tenjiku01_NZ_BCMR01000011 AGCGGGGCACTCGGTGTTGCTGCAGGT-GTTATTGCTACTAATAAT---G  
ompA_CMCMICRO2_HM587249.1 AGCGGGGCACTCGGTGTTGCTGCAGGT-GTTATTGCTACTAATAAT---G  
ompA_Rsiciliensis_HM014439.1 GCGGGGCACTCGGTGTTGCTGCAGGT-GTTATTGCTACTAATAATAATG  
ompA_SL154 -----  
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```

```
ompA_Rkellyi_DQ080005.1 CAGCATTTAGGGATAATGTTAACAATAATAATTGGAATGAGATAACGGCT  
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ompA_CMCMICRO2_HM587249.1 CAGCATTTAGGGATAATGTTAACAATAATAATTGGAATGAGATAACGGCT  
ompA_Rsiciliensis_HM014439.1 CAGCATTTAGGATGATAATGTTGGCAATAATAATAATTGGAATGAGATAACGGCT  
ompA_SL154 -----  
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ompA_CMCMICRO2_HM587249.1 GGAGGGGTAGCTAATGGTACTCCTGCTGGCGGTCTCAAGACAATTGGGC  
ompA_Rsiciliensis_HM014439.1 GAGGGGTAGCTAATGGTACTCCTGCTGGCAGTCTCAAAACAATTGGGC  
ompA_SL154 -----  
* *****
```

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ompA_Tenjiku01_NZ_BCMR01000011 ATTTACTTACGGTGGTAATTATGCTATCGATGCAGATGTAATCGGTCGTA  
ompA_CMCMICRO2_HM587249.1 ATTTACTTACGGTGGTAATTATGCTATCGATGCAGATGTAATCGGTCGTA  
ompA_Rsiciliensis_HM014439.1 ATTTACTTACGGTGGTGAATTATCTATCCTGCAGATGTAATCGGTCGTA  
ompA_SL154 -----  
*****
```

```
ompA_Rkellyi_DQ080005.1 TTATTATGGCTATAAATGTTGCGGATACTAATCCTGTAAGTCTAAATATT  
ompA_Tenjiku01_NZ_BCMR01000011 TTATTATGGCTATAAATGTTGCGGATACTAATCCTGTAAGTCTAAATATT  
ompA_CMCMICRO2_HM587249.1 TTATTATGGCTATAAATGTTGCGGATACTAATCCTGTAAGTCTAAATATT  
ompA_Rsiciliensis_HM014439.1 TTATTATGGCTATAAATGTTGCGGGTACTAATCCCGTAGGCTCTAAATATT  
ompA_SL154 -----  
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ompA_CMCMICRO2_HM587249.1 ATGCAAAATACCACCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGCC  
ompA_Rsiciliensis_HM014439.1 ACTCAAAATACCACCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGCC  
ompA_SL154 -----
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* *****

ompA_Rkellyi_DQ080005.1
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ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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TGTTACTATTACTGCCGGCCAAAACCTTAACCTTTAAACGGTACTAATGCTA
TGTTACTATTACTGCCGGCCAAAACCTTAACCTTTAAACGGTACTAATGCTA
TGTTACTATTACTGCCGGCCAAAACCTTAACCTTTAAACGGTACTAATGCTA

ompA_Rkellyi_DQ080005.1
ompA_Tenjiku01_NZ_BCMR0100011
ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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TTGCTGCAAATCATGGTTTTGATGCTCCTGCCAATAATTATACAGGTTTA
TTGCTGCAAATCATGGTTTTGATGCTCCTGCCAATAATTATACAGGTTTA
TTGCTGCAAATCATGGTTTTGATGCTCCTGCCAATAATTATACAGGTTTA

ompA_Rkellyi_DQ080005.1
ompA_Tenjiku01_NZ_BCMR0100011
ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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GGAAATATATTTTTAGAGGGAGTGAATGCTGGAATAATTATAGACTCTAA
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GGAAATATATTTTTAGAGGGAGTGAATGCTGGAATAATTATAGACTCTAA

ompA_Rkellyi_DQ080005.1
ompA_Tenjiku01_NZ_BCMR0100011
ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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AGCCCCGGCAAAGATAACGCTTGCAGGAAATATAGATGGAGGAGGTATAA

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ompA_Tenjiku01_NZ_BCMR0100011
ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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TAACGTTTACCGATAATAGTACAGTAACTGGCGATATAGGTAATACAAAT

TAAC---TGTC AATAC-----

**** * * * * * * * * *

ompA_Rkellyi_DQ080005.1
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ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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ompA_Tenjiku01_NZ_BCMR0100011
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ompA_Rsiciliensis_HM014439.1
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ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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ompA_Rkellyi_DQ080005.1
ompA_Tenjiku01_NZ_BCMR0100011
ompA_CMCMICRO2_HM587249.1
ompA_Rsiciliensis_HM014439.1
ompA_SL154

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ompA_Rkellyi_DQ080005.1 -----
ompA_Tenjiku01_NZ_BCMR01000011 TATAGGTAATACAAATGCATTAGCAAAAGTGAATGTAGGAGCAGGTTTGC
ompA_CMCMICRO2_HM587249.1 -----
ompA_Rsiciliensis_HM014439.1 -----
ompA_SL154 -----

ompA_Rkellyi_DQ080005.1 -----
ompA_Tenjiku01_NZ_BCMR01000011 TACAAGTACAAGGCGGAGTGGTAAAAGCGAATAAAATAAACTTAACGGAT
ompA_CMCMICRO2_HM587249.1 -----
ompA_Rsiciliensis_HM014439.1 -----
ompA_SL154 -----

ompA_Rkellyi_DQ080005.1 -----
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ompA_Rsiciliensis_HM014439.1 -----
ompA_SL154 -----

ompA_Rkellyi_DQ080005.1 -----
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ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
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ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 GTGCGGCTATA CAGCAGAATAGAACAAACAAACGGAGTTGCTACAACCTGTT
ompB_Tenjiku-01_NZ_BCMR0100000 GTGCTGCTATGCAGCAGAATAGAACAAACAAACGGAGTTGCTACAACCTGTT
ompB_RickettsiaCMCMicro2_JN209 -----
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ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 GATGGTGC GGGATTTGACCCAACTGCCGGTCCTGCAAATGTTGCAGTTGC
ompB_Tenjiku-01_NZ_BCMR0100000 GATGGTGC GGGATTTGACCAAGCTGTCCGGTCCTGCAAATGCTGCAGTTGC
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ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
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ompB_RickettsiaCMCMicro2_JN209

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ompB_RickettsiaCMCMicro2_JN209

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ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_RickettsiaCMCMicro2_JN209

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ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
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ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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AATGCTAATGCTTTAAATTTACAAGCAGGTGGTACTACTATTAATTTTAA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

CAGGATTTGTTGTTAGCGTAGATAATGGTAAGGTAGCAACAATCGATGGA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
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ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000

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ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 CAGGTGTGATAACTTTTGATGCTAACGGTGCTTTAGCAAGTGCTAGTGCA
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GATGCAAATGTTGCGGTGACAAATAATATTACAGCAATGAAGCATCAGG
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TGCTGGAGTTGTCCAATTATCAGGAACACATGCTGCCGAGTTACGTTTACG
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GAAATGCCGGTTCTATCTTTAAACTTGCTGACGGTACAGTTATAAACGGT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
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ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TACCTTAGACGGTAGTGCTACAATTACCGGTGATATAGGGAACGCTGGCG
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GTGCTGCTGCGTTACAAGCAATTACTTTAGCTAACGATGCTACAAAACA
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TTAACACTTGGTGGAGCAAATATTATCGGTGCTAATGGTGAACGATTGA
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TTTCCAAGCTAACGGTGGTACTATTAAATTAACAAGCACTCAAATAATA
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TTGTAGTTGATTTTGATTTAGCTATAACTACTGATCAAACAGGCGTTGTT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

ATTGGAAATAACGGTGCAGTACAATTCGCGCATAATACTTATTTAATAAC

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

TAAATAATAATACAACCTCTTGCAGCCGGTACAAATTTAGGTAGTGCTACA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

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ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

CTACCGATGCTAACGTAGGTTCTTTTCGTCTTTAATGCCGGTGAACAAAT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

ATAGTAAGCGGTACAGTCGGTGGACAGCAAGGTAATAAGTTTAATACTGT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000

AGCATTAGGTAACGGTACTACTGTTAAGTTCTTAGGTAATGCAACATTTA

ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 ACGGTAACACTACAATTGTAGCTAATTCTACCTTACAAGTCAGTGGTAAC
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TATACTGCAGACTTTGTTGCATCTGCCGATGGTACCGGTATAGTAGAATT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 CGTTAACAGCGATCCTATTACCGTAACATTAAACAAACAAGTTGCACCTG
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TTGTTAATGCTTTAAACAAATAACGGTTTCTGGTCCCGTAACGTAGTG
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 ATTAATGAGATAGGTAATGCAGGTAATTATCATGGTGCCGTGACTGATAC
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GATTGCTTTTGAAAATTCAAGTTTAGGTGCAGCTTTATTCTTACCTAGAG
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GTATTCCATTCAATGATGCAGGCAACAGAATTCTTTAAACAATTAAGT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 ACCGTAGGTAATAAAACAGCTACAGGTTTAAATGTTCCCTAGCGTGATTGT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TTTAGGTGTTGATAGTGTATCGCTGACGGTCAAGTAATCGGTGATCAAA
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 ATAATATCGTAGGTCTAGGTCTTGGAAGCGATAACGGCATAATCGTTAAT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GCTACTACATTATATGCAGGTATCGGTACTGTAAACAATAATCAAGGTAC

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

TGTCACACTTAGCGGTGGTATTCTTAATATCCCTGGTACAGTTTATGGCT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

TAGGCATAGGTATTGGCGCTCCACAGTTCAAGCAAGTAACGTTTACTACA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GACTATAACAACCTTAGGTAATATTATTGCAACTAACGTAACAATTAATGA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

CGGTGTAACGTACTACAGGCGGTATAGCAGGAACAGATTTTGACGGTA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

AAATTACTCTTGAAGTGTAAACGGTAACGGTAATGTAAGATTTGCTGAC

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GGTATATTGTCTAATTCTACAAGTATGATTGGTACTACTAAAGCTAATAA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

TGGTACTGTAACCTTATTTAGGTAATGCATTCGTCCGTAATATAGGTGATT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

CAGATACTCCTGTAGCTTCTGTTAGATTTACAGGTAGTGATAGTGGTGCA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GTATTACAAGGAAATATTTATTCACAAGTCATAGACTTTGGTACTTATCA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000

CTTAGGTATTTAAATTCATGTAATTTTAGGCGGCGGTACTACTGCTA

ompB_RickettsiaCMCMicro2_JN209	----- -----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	TTAACGGTAAAATCGATCTTCTTACAAACTTTAACATTTGCAAGTGGT
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	ACTTCAACATGGGGAAACAATACTTCTATTGAAACTACTTTAACATTAGC
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	AAACGGTAATATAGGTCACATCGTTATCGTGGAAGGTGCGCAAGTTAATG
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	CAACAACCACAGGAACTACAACCATTAACGTACAAGATAATGCCAATGCA
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	AATTTTCAGTGGTACACAACTTATACTTTAATCCAAGGTGGTGTAGATT
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	TAATGGTACTTTAGGAGGTCCCAACTTTGCTGTAACCGGAAGTAATCGTT
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	TCGTAAATTATAGTTTAATACGTGCTGCTAACCAAGATTATGTAATAACA
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	CGTACTAACAATGCAGAAAACGTAGTTACTAATGATATCGCAAATAGTCC
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	GTTTGGAGGTGCACCGGGTGTAGGTGAGAACGTTACAACATTTGTAATG
ompB_RickettsiaCMCMicro2_JN209	-----
ompB_SL154_MZ970569	-----
ompB_Rsiciliensis_HM014441.1	-----
ompB_Tenjiku-01_NZ_BCMR0100000	CAACTAATACTGCAGCATATAATAATCTTCTTTTAGCTAAAAATAGTGCT
ompB_RickettsiaCMCMicro2_JN209	-----

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GATGCTGCTAATTTTGTGGAGCTATCGTTACCGATACAAGTGC GGCCAT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

AACTAATGCACAATTAGATGTAGCTAAAGATATCCAAGCTCAACTTGGTA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

ACAGATTAGGTGCTCTTAGATATTTAGTACTCCTGAAACTGCTGTAATG

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GCTGGACCTGAAGCTGAAGCAATACCGGCTGCGGTTGCTGCAGGTGACGA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GGCTGTTGATAATGTAGCTTACGGTATATGGGCAAACCTTTCTATACTG

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

ATGCACACCAAAGTAAGCAAGGTGGTTTAGCTGGTTATAAAGCTAAAACC

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

ACCGGTGTCGTAATCGGTTTAGATACGCTAGCTAACGATAACTTAATGAT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

TGGTGCTGCTATAGGTATCACTAAAACCTGATATAAAACACCAAGATTATA

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

AGAAAGGTGATAAAACCGACGTTAACGGTTTCTCATTCTCTTATATGGT

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000
ompB_RickettsiaCMCMicro2_JN209

GCCCAGCAGCTTGTTAAGAACTTCTTTGCTCAAGGTAGTGCAATATTTAG

ompB_SL154_MZ970569
ompB_Rsiciliensis_HM014441.1
ompB_Tenjiku-01_NZ_BCMR0100000

CTTAAACCAAGTGAAGAACAAAAGTCAGCGTTACTTCTTCGATGCTAACG

ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GTAAATATGAGCAAGCAAATTGCTGCCGGTCATTACGATAACATGACATTC
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GGTGGTAACTTAACAGTCGGTTATGATTACAATGCAATGCAAGGTGTGTT
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 AGTAACTCCAATGGTAGGACTTAGCTACTTAAAGTCTTCTGACGAAAAC
ompB_RickettsiaCMCMicro2_JN209 -----GGACTTAGCTACTTAAAGTCTTCTGACGAAAAC

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 ACAAAGAAACCGGTGCAACAGTTGCAAACAAGCAAGTTAACAGCAAGTTT
ompB_RickettsiaCMCMicro2_JN209 -----ACAAAGAAACCGGTGCAACAGTTGCAAACAAGCAAGTTAACAGCAAGTTT

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 AGCGATAGAACCGATTTAATAGTAGGTGCTAAAGTAGCCGGCAGTACTAT
ompB_RickettsiaCMCMicro2_JN209 -----AGCGATAGAACCGATTTAATAGTAGGTGCTAAAGTAGCCGGCAGTACTAT

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GAACATAACTGATCTTGGCGTATATCCGGAAGTTTCACGCTTTTGTGGTTC
ompB_RickettsiaCMCMicro2_JN209 -----GAACATAACTGATCTTGGCGTATATCCGGAAGTTCCCGCTTTTGTGGTTC

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 ACAAAGTAATCGGTAGATTATCTAAAACCTCAGTCTGTATTAGACGGACAA
ompB_RickettsiaCMCMicro2_JN209 -----ACAAAGTAATCGGTAGATTATCTAAAACCTCAGTCTGTATTAGACGGACAA

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 GTTACTCCGTGTATCAGCCAGCCTGACAGAACCGCTAAAACATCTTATAA
ompB_RickettsiaCMCMicro2_JN209 -----GTTACTCCGTGTA-----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----
ompB_Tenjiku-01_NZ_BCMR0100000 TTTAGGTTTAAAGTGCAAGCATAAGATCTGATGCTAAGATGGAGTACGGAA
ompB_RickettsiaCMCMicro2_JN209 -----

ompB_SL154_MZ970569 -----
ompB_Rsiciliensis_HM014441.1 -----

```

ompB_Tenjiku-01_NZ_BCMR0100000      TCGGTTACGATGCTCAGATTTCAGTAAATATATTGCACATCAAGGTACT
ompB_RickettsiaCMCMicro2_JN209      -----

ompB_SL154_MZ970569                  -----
ompB_Rsiciliensis_HM014441.1        -----
ompB_Tenjiku-01_NZ_BCMR0100000      CTAAAAGTCCGTGTAAACTTCTAA
ompB_RickettsiaCMCMicro2_JN209      -----

```

gltA alignment

gltA_Tenjiku01_LC089864.1 sequence that matches
gltA_Tenjiku01_NZ_BCMR01000005.1:5548-6855 (100%) is underlined

```

gltA_NZ_BCMR01000005.1_5548-68      ATGACCAATGAAAATAATAATGATTTCAGAAATTTGCTGAATTAATAATCAG
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      AGGAAAAATATTTAAATTACCTATACTTAAAGCAAGTATCGGTGAGGATG
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      TAATCGATATAAGTAGGGTATCTGCGGAAGCCGATTGTTTTACTTACGAC
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      CCGGGTTTTATGTCTACTGCTTCTTGTGCTACTTACTATCACCTATATAGA
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      CGGTGATAAAGGAATCTTGC GG CATCGAGGATATGATATTAAGACTTAG
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      CTGAGAAAAGTGATTTTTTAGAAGTGGCATATTTACTGATTTATGGGGAA
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      CTACCAAGTGGCGAGCAGTATAATAATTTCACTAACAGGTTGCTCATCA
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

```

gltA_NZ_BCMR01000005.1_5548-68      TTCATTAGTGAATGAAAGATTACACTATTTATTTCAAACCTTTTGTAGCT
gltA_cmc08_GQ260637.1                -----
gltA_SL154_MZ970598                  -----
gltA_Rsiciliensis_HM014438.1        -----

```

gltA_NZ_BCMR01000005.1_5548-68 CTTCTCATCCTATGGCTATTATGCTTGC GGCTGTCCGGTCTCTTTTCGGCA
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 TTTTATCCTGATTTATTGAATTTTAAGGAAGCAGATTACGAACTTACCGC
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 TATTAGAATGATTGCTAAGATACCTACCATCGCTGCAATGTCTTATAAAT
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 ATTCTATAGGACAACCGTTTATTTATCCTGATAATTCGTTAGATTTTACC
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 GAAAATTTTCTGCATATGATGTTTGCAACGCCTTGATGAAATATACAGT
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 AAATCCAATAATAAAAAATGCTCTTAATAAGATATTTATCCTACATGCCG
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 ATCATGAGCAGAATGCTTCTACTTCAACAGTCCGAATTGCCGGCTCATCC
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 GGAGCTAACCCTTTTGCTTGTATTAGCACGGGTATTGCCTCACTTTGGGG
gltA_cmc08_GQ260637.1 -----
gltA_SL154_MZ970598 -----
gltA_Rsiciliensis_HM014438.1 -----

gltA_NZ_BCMR01000005.1_5548-68 ACCTGCTCACGGCGGGGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
gltA_cmc08_GQ260637.1 -----AAGCAGTGATAAATATGCTTAAAGAAA
gltA_SL154_MZ970598 -----GGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
gltA_Rsiciliensis_HM014438.1 -----GGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
***** * *****

gltA_NZ_BCMR01000005.1_5548-68 TCGGTAGTTCAGAGTATATTCCTAAATATATAGCTAAAGCTAAGGATAAA
gltA_cmc08_GQ260637.1 TCGGTAGTTCAGAGTATATTCCTAAATATATAGCTAAAGCTAAGGATAAA
gltA_SL154_MZ970598 TCGGTAGTTCAGAGTATATTCCTAAATATATAGCTAAAGCTAAGGATAAA
gltA_Rsiciliensis_HM014438.1 TCGGTAGTTCAGAGTATATTCCTAAATATATAGCTAAAGCTAAGGATAAA

gltA_NZ_BCMR01000005.1_5548-68 AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAACTA
gltA_cmc08_GQ260637.1 AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAACTA


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gltA_SL154_MZ970598      AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
gltA_Rsiciliensis_HM014438.1  AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
*****

gltA_NZ_BCMR01000005.1_5548-68  TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
gltA_cmc08_GQ260637.1          TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
gltA_SL154_MZ970598          TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
gltA_Rsiciliensis_HM014438.1  TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
*****

gltA_NZ_BCMR01000005.1_5548-68  AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
gltA_cmc08_GQ260637.1          AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
gltA_SL154_MZ970598          AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
gltA_Rsiciliensis_HM014438.1  AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
*****

gltA_NZ_BCMR01000005.1_5548-68  GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
gltA_cmc08_GQ260637.1          GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
gltA_SL154_MZ970598          GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
gltA_Rsiciliensis_HM014438.1  GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
*****

gltA_NZ_BCMR01000005.1_5548-68  AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTATGGGTATACCGT
gltA_cmc08_GQ260637.1          AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTATGGGTATACCGT
gltA_SL154_MZ970598          AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTAGGGGTATACCGT
gltA_Rsiciliensis_HM014438.1  AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTA-----
*****

gltA_NZ_BCMR01000005.1_5548-68  CGCAAATGTTACGGTACTTTTTGCAATAGCAAGAACCGTAGGCTGGATG
gltA_cmc08_GQ260637.1          CGCA-----
gltA_SL154_MZ970598          CGCAA-----
gltA_Rsiciliensis_HM014438.1  -----
*****

gltA_NZ_BCMR01000005.1_5548-68  GCACAATGAAAGAAATGCACGAAGACCCTGAACAAAAAATCAGCAGACC
gltA_cmc08_GQ260637.1          -----
gltA_SL154_MZ970598          -----
gltA_Rsiciliensis_HM014438.1  -----

gltA_NZ_BCMR01000005.1_5548-68  TAGACAGCTTTACACCGTTATGTACATAGAGAGTATAAGGGTATTCGGG
gltA_cmc08_GQ260637.1          -----
gltA_SL154_MZ970598          -----
gltA_Rsiciliensis_HM014438.1  -----

gltA_NZ_BCMR01000005.1_5548-68  AGAGGTAA
gltA_cmc08_GQ260637.1          -----
gltA_SL154_MZ970598          -----
gltA_Rsiciliensis_HM014438.1  -----

```

sca4 alignment

No sca4_SL154 or CMCMICRO_2 sequences obtained

Two Tenjiku01 sca4 sequences identical except for length:

sca4_NZ_BCMR01000008.1:35645-38707 Rickettsia sp. Tenjiku01,
>sca4_Tenjiku01_LC089863.1

```

sca4_Tenjiku01_LC089863.1      -----AA
sca4_NZ_BCMR01000008.1_35645-3  ATGAGTAAAGACGGTAACCTAGATACAAGTGAATTTGATCCTTTAGCAA

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sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1 TAAGGAATATACAGAAGCACAAAAGCAAACATTAGAACAAGAGCAAAAAG
sca4_NZ_BCMR01000008.1_35645-3 TAAGGAATATACAGAAGCACAAAAGCAAACATTAGAACAAGAGCAAAAAG
sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1 AATTTTTATCTCAAAC TACAACCCAGAACTAGAAAGCTGACGATGGTTTT
sca4_NZ_BCMR01000008.1_35645-3 AATTTTTATCTCAAAC TACAACCCAGAACTAGAAAGCTGACGATGGTTTT
sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1 ATCGTTACTTCTGCATCTTCTGCTCAATCTACCCCTTCAATTAGTGCTTT
sca4_NZ_BCMR01000008.1_35645-3 ATCGTTACTTCTGCATCTTCTGCTCAATCTACCCCTTCAATTAGTGCTTT
sca4_Rsiciliensis_HM014440.1 -----ATCTTCTGCTCAATCTA TCCCTTCAATTAGTGCTTT
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sca4_Tenjiku01_LC089863.1 ATCGGACAATATCTCTCCTGACAGTCAGACATCAGACCCAATAACCAAGG
sca4_NZ_BCMR01000008.1_35645-3 ATCGGACAATATCTCTCCTGACAGTCAGACATCAGACCCAATAACCAAGG
sca4_Rsiciliensis_HM014440.1 ATCGGACAATATCTCTCCTGACAGTCAGACATCAGACCCAATAACCAAGG
*****

sca4_Tenjiku01_LC089863.1 CTGTAAGAGAAAACAATTATACAACCGCAAAAAGATAAATTTAATAGAACAA
sca4_NZ_BCMR01000008.1_35645-3 CTGTAAGAGAAAACAATTATACAACCGCAAAAAGATAAATTTAATAGAACAA
sca4_Rsiciliensis_HM014440.1 CTGTAAGAGAAAACAATTATACAACCGCAAAAAGATAAATTTAATAGAACAA
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sca4_Tenjiku01_LC089863.1 ATATTTAAAAGACCTGGCAGCCCTTACAGACCGTGATTTAGCTGAACAAAA
sca4_NZ_BCMR01000008.1_35645-3 ATATTTAAAAGACCTGGCAGCCCTTACAGACCGTGATTTAGCTGAACAAAA
sca4_Rsiciliensis_HM014440.1 ATATTTAAAAGACCT TGCAGCCCTTACAGACCGTGATTTAGCTGAACAAAA
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sca4_Tenjiku01_LC089863.1 AAGAAAAGAAAATAGAAGAAGAAAAGATAAAAACATTAAGTACTTTTTTTCG
sca4_NZ_BCMR01000008.1_35645-3 AAGAAAAGAAAATAGAAGAAGAAAAGATAAAAACATTAAGTACTTTTTTTCG
sca4_Rsiciliensis_HM014440.1 AAGAAAAGAAAATAGAAGAAGAAAAG C TAAAACATTAAGTACTTTTTTTCG
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sca4_Tenjiku01_LC089863.1 GTAATCCGGCTAATAGAGCATTTATTGATAAGGCTTTAGAAAATCCTGAG
sca4_NZ_BCMR01000008.1_35645-3 GTAATCCGGCTAATAGAGCATTTATTGATAAGGCTTTAGAAAATCCTGAG
sca4_Rsiciliensis_HM014440.1 GTAATCCGGCTAATAGAGCATTTATTGATAAGGCTTTAGAAAATCCTGAG
*****

sca4_Tenjiku01_LC089863.1 CTTAAAAAGAAATTAGAATCAATAGAAATAGCCGGCTATAAAAATGTGCA
sca4_NZ_BCMR01000008.1_35645-3 CTTAAAAAGAAATTAGAATCAATAGAAATAGCCGGCTATAAAAATGTGCA
sca4_Rsiciliensis_HM014440.1 CTTAAAAAGAAATTAGAATCAATAGAAATAGCCGGCTATAAAAATGTGCA
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sca4_Tenjiku01_LC089863.1 TAATACATTTAGTGCCGCTAGTGGATACCCCTGGTGGATTTAAACCGGTAC
sca4_NZ_BCMR01000008.1_35645-3 TAATACATTTAGTGCCGCTAGTGGATACCCCTGGTGGATTTAAACCGGTAC
sca4_Rsiciliensis_HM014440.1 TAATACATTTAGTGCCGCTAGTGG C TACCCTGGTGGATTTAAACCGGTAC
*****

sca4_Tenjiku01_LC089863.1 AGTGGGAAAATCACGTAAGTGCAAGCGATCTTAGAGCAACAGTAGTTAAA
sca4_NZ_BCMR01000008.1_35645-3 AGTGGGAAAATCACGTAAGTGCAAGCGATCTTAGAGCAACAGTAGTTAAA
sca4_Rsiciliensis_HM014440.1 AGTGGGAAAATCACGTAAGTGCAAGCGATCTTAGAGCAACAGTAGTTAAA
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sca4_Tenjiku01_LC089863.1 AATGATGCAGGTGATGAACTCTGTACCTTAAATGAAACAACCTGTTAAAAC
sca4_NZ_BCMR01000008.1_35645-3 AATGATGCAGGTGATGAACTCTGTACCTTAAATGAAACAACCTGTTAAAAC
sca4_Rsiciliensis_HM014440.1 AATGATGCAGGTGATGAACTCTGTACCTTAAATGAAACAACCTGTTAAAAC
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sca4_Tenjiku01_LC089863.1 TAAGCCTTTTACTTTAGCTAAACAAGACGGTACTCAGGTTAGATCAGCT
sca4_NZ_BCMR01000008.1_35645-3 TAAGCCTTTTACTTTAGCTAAACAAGACGGTACTCAGGTTAGATCAGCT
sca4_Rsiciliensis_HM014440.1 TAAGCCTTTTACTTTAGCTAAACAAGACGGTACTCAGGTTAGATCAGCT
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sca4_Tenjiku01_LC089863.1 CATATAGGGAAATAGATTTTCTATAAAACTTGATAAAGCCGATGGGTCA
sca4_NZ_BCMR01000008.1_35645-3 CATATAGGGAAATAGATTTTCTATAAAACTTGATAAAGCCGATGGGTCA
sca4_Rsiciliensis_HM014440.1 CATATAGGGAAATAGATTTTCTATAAAACTTGATAAAGCCGATGGGTCA
*****

sca4_Tenjiku01_LC089863.1 ATGCATTTATCGATGGTAGCATTAAAAGCTGATGGCACAAAGCCCTTCAA
sca4_NZ_BCMR01000008.1_35645-3 ATGCATTTATCGATGGTAGCATTAAAAGCTGATGGCACAAAGCCCTTCAA
sca4_Rsiciliensis_HM014440.1 ATGCATTTATCGATGGTAGCATTAAAAGCTGATGGCACAAAGCCCTTCAA
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sca4_Tenjiku01_LC089863.1 AGATAAAGCCGTATATTTCACTGCCACTACGAAGAAGGACCAAATGGTA
sca4_NZ_BCMR01000008.1_35645-3 AGATAAAGCCGTATATTTCACTGCCACTACGAAGAAGGACCAAATGGTA
sca4_Rsiciliensis_HM014440.1 AGATAAAGCCGTATATTTCACTGCCACTACGAAGAAGGACCAAATGGTA
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sca4_Tenjiku01_LC089863.1 AACCTCAACTTAAAGAAATAAGCTCACAAAACCTTTAAAATTTGCCGGA
sca4_NZ_BCMR01000008.1_35645-3 AACCTCAACTTAAAGAAATAAGCTCACAAAACCTTTAAAATTTGCCGGA
sca4_Rsiciliensis_HM014440.1 AACCTCAACTTAAAGAAATAAGCTC-----
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sca4_Tenjiku01_LC089863.1 ACCGGAGATGACGCAATAGCTTATATAGAGCATGGTGGAGAAATTTATAC
sca4_NZ_BCMR01000008.1_35645-3 ACCGGAGATGACGCAATAGCTTATATAGAGCATGGTGGAGAAATTTATAC
sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1 ACTTGCGGTTAACACGCGGTAATATAAAGAAATGATGAAGGAGGTAGAAC
sca4_NZ_BCMR01000008.1_35645-3 ACTTGCGGTTAACACGCGGTAATATAAAGAAATGATGAAGGAGGTAGAAC
sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1 TAAATCAAGGGCAGAGCGTTGATTTATCGCAAGCTGAAGATATTATAATA
sca4_NZ_BCMR01000008.1_35645-3 TAAATCAAGGGCAGAGCGTTGATTTATCGCAAGCTGAAGATATTATAATA
sca4_Rsiciliensis_HM014440.1 -----
*****

sca4_Tenjiku01_LC089863.1 GGACAAGGACAAAGTAAGGAACAACCGCTAATAACTCCACAGCAAACAAC
sca4_NZ_BCMR01000008.1_35645-3 GGACAAGGACAAAGTAAGGAACAACCGCTAATAACTCCACAGCAAACAAC
sca4_Rsiciliensis_HM014440.1 -----
*****

sca4_Tenjiku01_LC089863.1 AAGTTCATCGGTTGAACCACCTCAGTATAAAACAACAAGTACCACCAATTA
sca4_NZ_BCMR01000008.1_35645-3 AAGTTCATCGGTTGAACCACCTCAGTATAAAACAACAAGTACCACCAATTA
sca4_Rsiciliensis_HM014440.1 -----
*****

sca4_Tenjiku01_LC089863.1 CTCCTACTAACCAACCCTGCAACCTGAGACTTCACAAATGCCACAGTCG
sca4_NZ_BCMR01000008.1_35645-3 CTCCTACTAACCAACCCTGCAACCTGAGACTTCACAAATGCCACAGTCG
sca4_Rsiciliensis_HM014440.1 -----
*****

sca4_Tenjiku01_LC089863.1 CAACAAGTGAATCCAAATCTTCTTAATGCAGCTACGGCTTTATCAGGCAG
sca4_NZ_BCMR01000008.1_35645-3 CAACAAGTGAATCCAAATCTTCTTAATGCAGCTACGGCTTTATCAGGCAG
sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1 CATGCAAGATTTATTAATATGTAAATACAGGTTTAAACAAAAGAAATTG
sca4_NZ_BCMR01000008.1_35645-3 CATGCAAGATTTATTAATATGTAAATACAGGTTTAAACAAAAGAAATTG
sca4_Rsiciliensis_HM014440.1 -----
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sca4_Tenjiku01_LC089863.1      ATAGCAATAAAACAAATTGATTTAATTAAGAAGCAGCCACGGCAATTCTT
sca4_NZ_BCMR0100008.1_35645-3 ATAGCAATAAAACAAATTGATTTAATTAAGAAGCAGCCACGGCAATTCTT
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      AATAATGAGAAAAGTGATATGCGGAAAAGCAGGCTAATATCATTGCTTT
sca4_NZ_BCMR0100008.1_35645-3 AATAATGAGAAAAGTGATATGCGGAAAAGCAGGCTAATATCATTGCTTT
sca4_Rsiciliensis_HM014440.1  -----
*****

sca4_Tenjiku01_LC089863.1      AGCTGAAAATACGGTCAATAATAAAAACCTCAAACCGGATGCAAAAGTAG
sca4_NZ_BCMR0100008.1_35645-3 AGCTGAAAATACGGTCAATAATAAAAACCTCAAACCGGATGCAAAAGTAG
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      CTGGAGTCAATGCAGTATTAGAAACCATAAAAAATGATCAGAATACCCCA
sca4_NZ_BCMR0100008.1_35645-3 CTGGAGTCAATGCAGTATTAGAAACCATAAAAAATGATCAGAATACCCCA
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      GACCTAGAAAAATCAAAAATGCTTGAAGCTACAGTAGCTATCGTTTTAAA
sca4_NZ_BCMR0100008.1_35645-3 GACCTAGAAAAATCAAAAATGCTTGAAGCTACAGTAGCTATCGTTTTAAA
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      TTCAGAGAAATCTTGAGCCGAAGCAAAAACAGCAGATGTTAGAAAAGGCAG
sca4_NZ_BCMR0100008.1_35645-3 TTCAGAGAAATCTTGAGCCGAAGCAAAAACAGCAGATGTTAGAAAAGGCAG
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      TAGACGTCGGTTTAAAGTCTTAAAGATGATGCAAGTAGAGCTGCAACAATT
sca4_NZ_BCMR0100008.1_35645-3 TAGACGTCGGTTTAAAGTCTTAAAGATGATGCAAGTAGAGCTGCAACAATT
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      GATGGTATTAAGGATATTGTAATAACAAGTAACCTTTCTACTGAAGATAC
sca4_NZ_BCMR0100008.1_35645-3 GATGGTATTAAGGATATTGTAATAACAAGTAACCTTTCTACTGAAGATAC
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      AATGCTTATAGCAGTAGGTGATAAGGTTAATGTCTCTGAATTAAGCAATG
sca4_NZ_BCMR0100008.1_35645-3 AATGCTTATAGCAGTAGGTGATAAGGTTAATGTCTCTGAATTAAGCAATG
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      CGGCAAAACAAAATTTATTAGGTTCTGTATTAAAGAAAGGTGTAGAAGCC
sca4_NZ_BCMR0100008.1_35645-3 CGGCAAAACAAAATTTATTAGGTTCTGTATTAAAGAAAGGTGTAGAAGCC
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      CAAGTCTCAGTCTGGCACAACAACAATTGATGCAGCAGTATTTAGATAA
sca4_NZ_BCMR0100008.1_35645-3 CAAGTCTCAGTCTGGCACAACAACAATTGATGCAGCAGTATTTAGATAA
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      GATTACGGCAGAACAACCTAAAAAAGATACAATAAAAAAAGTAAATGATA
sca4_NZ_BCMR0100008.1_35645-3 GATTACGGCAGAACAACCTAAAAAAGATACAATAAAAAAAGTAAATGATA
sca4_Rsiciliensis_HM014440.1  -----
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sca4_Tenjiku01_LC089863.1      TTTTGTGGATCCTCTAAGTAATACTGAATTAAAAACAACAAACATACAA
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sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

TTTTGTTTGATCCTCTAAGTAATACTGAATTA AAAACAACAACATACAA

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

GCCATTACGTCTAATGTTTTAGATGGTCCGGCTACAGCAGAAGTAAAAGG
GCCATTACGTCTAATGTTTTAGATGGTCCGGCTACAGCAGAAGTAAAAGG

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

CGAAATAATTCAAGAAATTA CTAACATAGTTGCAGGAAGCTCGCTTGAAG
CGAAATAATTCAAGAAATTA CTAACATAGTTGCAGGAAGCTCGCTTGAAG

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

CTCAAGACAAAGCAGCGATTGTTAAAGGGATAGGCGAGACTATAGCTACT
CTCAAGACAAAGCAGCGATTGTTAAAGGGATAGGCGAGACTATAGCTACT

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

CATAGTGATACCTCTTTATCCTTACCTAATAAAGCACTTATTATGGCATC
CATAGTGATACCTCTTTATCCTTACCTAATAAAGCACTTATTATGGCATC

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

AGCGGAAAAAGGTATTGCAGAAAGTCAGACCAATTTACCTGATAGAGAGC
AGCGGAAAAAGGTATTGCAGAAAGTCAGACCAATTTACCTGATAGAGAGC

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

TAATGACTAAAGGGTTAGTAGACGGTATTTATGAAGGCAAAGGAGGTCTT
TAATGACTAAAGGGTTAGTAGACGGTATTTATGAAGGCAAAGGAGGTCTT

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

GAAATAACTAAGGCAGTTTCTAGCGGGATCGATAATAGTAATATTAATGA
GAAATAACTAAGGCAGTTTCTAGCGGGATCGATAATAGTAATATTAATGA

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

CTCTGAGAAAGAGGCACCTAAAAAAGCTAAAGATGCAGCGAGTGAGGCAG
CTCTGAGAAAGAGGCACCTAAAAAAGCTAAAGATGCAGCGAGTGAGGCAG

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

CTTTAGATAGAGACACTCAAAAATTTAACTGAAGGGTTAAAAGGACAGAAT
CTTTAGATAGAGACACTCAAAAATTTAACTGAAGGGTTAAAAGGACAGAAT

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

ATAGAAGAACACAAGCCTCACGATGATATATATAACAAAGCTCGAGAAGT
ATAGAAGAACACAAGCCTCACGATGATATATATAACAAAGCTCGAGAAGT

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

AATTAACGCTGTTAATCCTGTTATAGAAGCATTAGAAAAATCTAAAGACC
AATTAACGCTGTTAATCCTGTTATAGAAGCATTAGAAAAATCTAAAGACC

sca4_Tenjiku01_LC089863.1
sca4_NZ_BCMR01000008.1_35645-3
sca4_Rsiciliensis_HM014440.1

CGGTAGTGTCCGCGAGAAGAAAGAATTGTACAAGAACTTCTAGTATATTA
CGGTAGTGTCCGCGAGAAGAAAGAATTGTACAAGAACTTCTAGTATATTA

sca4_Tenjiku01_LC089863.1	AATAATATCTCTAAGCTTGACAGTTGAGAAAGTCAATAATTTTCGTACTAT
sca4_NZ_BCMR01000008.1_35645-3	AATAATATCTCTAAGCTTGACAGTTGAGAAAGTCAATAATTTTCGTACTAT
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	GCTTTCTCCAAATGGTAACCTTAAACTCTTGAAGAAAAAAGAGGAAAT
sca4_NZ_BCMR01000008.1_35645-3	GCTTTCTCCAAATGGTAACCTTAAACTCTTGAAGAAAAAAGAGGAAAT
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	CAATAAAAAAGTAGATGAGCTGGTAAAGCATTGGTACTAAATCTTCT
sca4_NZ_BCMR01000008.1_35645-3	CAATAAAAAAGTAGATGAGCTGGTAAAGCATTGGTACTAAATCTTCT
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	ACTGAAGAACAGCAAAGTTTCATTAAAGCTAATTTAATTGATGATAAAAC
sca4_NZ_BCMR01000008.1_35645-3	ACTGAAGAACAGCAAAGTTTCATTAAAGCTAATTTAATTGATGATAAAAC
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	TTTATCTAAAGAGGTACGTTTACAAGCTATAGATAAGTTATTACAAGAAC
sca4_NZ_BCMR01000008.1_35645-3	TTTATCTAAAGAGGTACGTTTACAAGCTATAGATAAGTTATTACAAGAAC
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	AAAAACGAGCAGAAGCAATTGAAAACCTAGTGTTAAAACGGAAGATGTA
sca4_NZ_BCMR01000008.1_35645-3	AAAAACGAGCAGAAGCAATTGAAAACCTAGTGTTAAAACGGAAGATGTA
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	AGGGTAGTATCAGGAAAGTCTAAATTTAAACCTATAAGTAAAGATAATCC
sca4_NZ_BCMR01000008.1_35645-3	AGGGTAGTATCAGGAAAGTCTAAATTTAAACCTATAAGTAAAGATAATCC
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	AGATATTGAAAAAGCTAAAATGGTAGTAGGAAGAGATAGAGTTAATATCA
sca4_NZ_BCMR01000008.1_35645-3	AGATATTGAAAAAGCTAAAATGGTAGTAGGAAGAGATAGAGTTAATATCA
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	AAGGGAATATAAAAATTATGGGAGCATTAAATGAATGCAAGAGATATCATT
sca4_NZ_BCMR01000008.1_35645-3	AAGGGAATATAAAAATTATGGGAGCATTAAATGAATGCAAGAGATATCATT
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	CAGTCGAAAAATTTAAATAAATCAACACCTATTTAAAGAGAGTCTTCCCC
sca4_NZ_BCMR01000008.1_35645-3	CAGTCGAAAAATTTAAATAAATCAACACCTATTTAAAGAGAGTCTTCCCC
sca4_Rsiciliensis_HM014440.1	-----

sca4_Tenjiku01_LC089863.1	TCCACAACGCTGAAA
sca4_NZ_BCMR01000008.1_35645-3	TCCACAACGCTGA--
sca4_Rsiciliensis_HM014440.1	-----



Part B. SL94 sequence comparisons to CDC_RconJC480-related sequences

ompA alignment

ompA_SL94_MZ970588	-----TTATTTCAAAAAGCAATACAACAAGGTCT
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ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

-----TTATTTCAAAAAGCAATACAACAAGGTCT
-----TTATTTCAAAAAGCAATACAACAAGGTCT
ATGGCGAATATTTCTCCAAAATTATTTCAAAAAGCAATACAACAAGGTCT

ATGGCGAATATTTCTCCAAAATTATTTCAAAAAGCAATACAACAAGGTCT

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

TAAAGCCGCTTTATTCCACCCTCAACCGCAGCGATAATGCTGAGTAGTA
TAAAGCCGCTTTATTCCACCCTCAACCGCAGCGATAATGCTGAGTAGTA
TAAAGCCGCTTTATTCCACCCTCAACCGCAGCGATAATGCTGAGTAGTA
TAAAGCCGCTTTATTCCACCCTCAACCGCAGCGATAATGCTGAGTAGTA
----GCCGCTTTATTCCACCCTCAACCGCAGCGATAATGCTGAGTAGTA
TAAAGCCTGCTTTATTCCACCCTCAACCGCAGCGATAATGCTGAGTAGTA

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

GCGGGGTACTCGGTGTTGCTGCAGGTGTTATTGCTACTAATAAT---GCA
GCGGGGTACTCGGTGTTGCTGCAGGTGTTATTGCTACTAATAAT---GCA
GCGGGGCCTCTCGGTGTTGCTGCAGGTGTTATTGCTACTAATAATAATGCA
GCGGGGCCTCTCGGTGTTGCTGCAGGTGTTATTGCTACTAATAATAATGCA
GCGGGGTACTCGGTGTTGCTGCAGGTGTTATTGCTACTAATAAT---GCA
GCGGGGCCTCTCGGTGTTGCTGCTAGGTGTTATTCTAATAATAATAATGCA

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

ACATTTAGTGATAATGTTGGCAATAATAATTGGAATGAGATAACGGCTGG
ACATTTAGTGATAATGTTGGCAATAATAATTGGAATGAGATAACGGCTGA
GCATTTAGTGATAATGTTGGCAATAATAATTGGAATGAGATAACGGCTGG
GCATTTAGTGATAATGTTGGCAATAATAATTGGAATGAGATAACGGCTGG
ACATTTAGTGATAATGTTGGCAATAATAATTGGAATGAGATAACGGCTGG
GCATTTAGTGATCTTGCTGTGTCCTCAATAATAATTGGAATGATAACGGCTGA

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

AGGGGTAGCTAATGGTACTCCTGCTGGCAGTCTCTCAAAACAATTG---GG
AGGGGTAGCTAATGGTACTCCTGCTGGCAGTCTCTCAAAACAATTG---GG
AGGGGTAGCTAATGGTACTCCTGCTGGCAGTCTCTCAAAACAATTG---GG
AGGGGTAGCTAATGGTACTCCTGCTGGCAGTCTCTCAAAACAATTG---GG
AGGGGTAGCTAATGGTACTCCTGCTGGCAGTCTCTCAAAACAATTG---GG
AGGGGTAGCTAATGGTACTCCTGTTGACGGTCTCAAGATGATGGTATGG

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

CATTTACTTACGGTGGTGATTATAATATCACTGCAGATGCAGCCGATCGT
CATTTACTTACGGTGGTGATTATAATATCACTGCAGATGCAGCCGATCGT
CATTTACTTACGGTGGTGATTATACTATCACTGCAGATGCAGCCGATCGT
CATTTACTTACGGTGGTGATTATACTATCACTGCAGATGCAGCCGATCGT
CATTTACTTACGGTGGTGATTATAATATCACTGCAGATGCAGCCGATCGT
CATTTACTTACGGTGGTGATCATACTATCACTGCAGATGACCCGCTCGT

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

ATTATTACGGCTATAAATGTTGCGGGTACTACTCCTGTAGGTCTAAATAT
ATTATTACGGCTATAAATGTTGCGGGTACTACTCCTGTAGGTCTAAATAT
ATTATTACGGCTATAAATGTTGCGGGTACTACTCCCGTAGGTCTAAATAT
ATTATTACGGCTATAAATGTTGCGGGTACTACTCCCGTAGGTCTAAATAT
ATTATTACGGCTATAAATGTTGCGGGTACTACTCCTGTAGGTCTAAATAT
ATTATTACGGCTATAAATGTTGCGGGTACTACTCCAGTAGGTCTAAATAT

ompA_SL94_MZ970588
ompA_RconJC480_MN548866.1
ompA_Rslovaca13-B_U43808.1
ompA_RslovacaCWPP-D_CP003375.1
ompA_Rhhaem_endosymb_KU895509.
ompA_RhhaemMeppadi_MF405464.2

TGCTCAAAATACCGTCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGC
TGCTCAAAATACCGTCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGC
TGCTCAAAATACCGTCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGC
TGCTCAAAATACCGTCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGC
TGCTCAAAATACCGTCGTTGGTTCGATTATAACGAGAGGTAACCTGTTGC
TACTCAAAATACCGTCGTTGGTTCGATTGTGACGGGAGGTAACCTGTTGC
* *****

ompA_SL94_MZ970588 CTGTTACTATTACTGCCGGCAAAGCTTAACTTTAAACGGTAATAATGCT
ompA_RconJC480_MN548866.1 CTGTTACTATTACTGCCGGCAAAGCTTAACTTTAAACGGTAATAATGCT
ompA_Rslovaca13-B_U43808.1 CTGTTACTATTAATGCCGGCAAAGCTTAACTTTAAACGGTAATAATGCT
ompA_RslovacaCWPP-D_CP003375.1 CTGTTACTATTAATGCCGGCAAAGCTTAACTTTAAACGGTAATAATGCT
ompA_Rhhaem_endosymb_KU895509. CTGTTACTATTACTGCCGGCAAAGCTTAACTTTAAACGGTAATAATGCT
ompA_RhhaemMeppadi_MF405464.2 CTGTTACTATTACTGCCGGCAAAGCTTAACTTTAAACGGTAATAATGCT

ompA_SL94_MZ970588 GTTGCTGCAAATAATGGTTTGTGATGCTCCTGCCGATAATTATACAGGTTT
ompA_RconJC480_MN548866.1 GTTGCTGCAAATAATGGTTTGTGATGCTCCTGCCGATAATTATACAGGTTT
ompA_Rslovaca13-B_U43808.1 GTTGCTGCAAATAATGGTTTGTGATGCTCCTGCCGATAATTATACAGGTTT
ompA_RslovacaCWPP-D_CP003375.1 GTTGCTGCAAATAATGGTTTGTGATGCTCCTGCCGATAATTATACAGGTTT
ompA_Rhhaem_endosymb_KU895509. GTTGCTGCAAATAATGGTTTGTGATGCTCCTGCCGATAATTATACAGGTTT
ompA_RhhaemMeppadi_MF405464.2 GTTGCTGCAAATAATGGTTTGTGATGCTCCTGCCGATAATTATACAGGTTT

ompA_SL94_MZ970588 AGGAAATATAACTTT-----
ompA_RconJC480_MN548866.1 AGGAAATATAACTTTAGGGGGAGCGAATGCTGCACTAATTATACAATCTG
ompA_Rslovaca13-B_U43808.1 AGGAAATATAACTTTAGGGGGAGCGAATGCTGCACTAATTATACAATCTG
ompA_RslovacaCWPP-D_CP003375.1 AGGAAATATAACTTTAGGGGGAGCGAATGCTGCACTAATTATACAATCTG
ompA_Rhhaem_endosymb_KU895509. AGGAAATATAACTTTAGGGGGAGCGAATGCTGCACTAATTATACAATCTG
ompA_RhhaemMeppadi_MF405464.2 AGGAAATATAACTTTAGGGGGAGCGAATGCTGCACTAATTATACAATCTG

ompA_SL94_MZ970588 -----
ompA_RconJC480_MN548866.1 CAGCCCCGGCAAAGATAACACTTGCAGGAAATATAAATGGAGGAGGTATA
ompA_Rslovaca13-B_U43808.1 CAGCCCCGGCAAAGATAACACTTGCAGGAAATATAAATGGAGGAGGTATA
ompA_RslovacaCWPP-D_CP003375.1 CAGCCCCGGCAAAGATAACACTTGCAGGAAATATAAATGGAGGAGGTATA
ompA_Rhhaem_endosymb_KU895509. CAGCCCCGGCAAAGATAACACTTGCAGGAAATATAAATGGAGGAGGTATA
ompA_RhhaemMeppadi_MF405464.2 TAA CCCCCGGCAAAGATAACACTTGCAGGAAATATAAATGGAGGAGGTATA
* *****

ompA_SL94_MZ970588 -----
ompA_RconJC480_MN548866.1 ATAACTGTCAAGAC-----
ompA_Rslovaca13-B_U43808.1 ATAACTGTCAAGAC-----
ompA_RslovacaCWPP-D_CP003375.1 ATAACTGTCAAGACAGATGCTGCCATTAACGGAACAATAGGTAATACAAA
ompA_Rhhaem_endosymb_KU895509. -----
ompA_RhhaemMeppadi_MF405464.2 ATAACTGTCAATACAGATGCTGCCATTAACGGAAC-----

ompB alignment

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 ---TACAGCTACCATAGTAGCCAGTTTTGCAGGTTTTCAGCTATGGGTGCTG
ompB_Rslovaca13-B_AF123723.2 TTCTACAGCTACCATAGTAGCCAGTTTTGCAGGTTTTCAGCTATGGGTGCTG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CTGTACAGCAGAATAGAACAACAACGGAGTTGCTACAACCTGTTGATGGT
ompB_Rslovaca13-B_AF123723.2 CTATACAGCAGAATAGAACAACAACGGAGTTGCTACAACCTGTTGATGGT
** *****

ompB_SL94_MZ970572 -----CTCTAAA
ompB_RconJC480_MN581995.1 GCGGGATTTGACCAAGATGCAGTTCCTGCAAATGTTGCAGTTGCTCTAAA
ompB_Rslovaca13-B_AF123723.2 GCGGGATTTGACCAACTGCAGTTCCTGCAAATGTTGCAGTTGCTCTAAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TGCAGTTATTACTGCTAGTGCTAATAAGGCTATTAATTTAAATACTCCAG
ompB_Rslovaca13-B_AF123723.2 TGCAGTTATTACTGCTAGTGCTAATAAGGCTATTAATTTAAATACTCCAG
TGCAGTTATTACTGCTAATGCTATAAGGCTATTAATTTAAATACTCCAG

ompB_SL94_MZ970572 CCGGTAGTTTTAACGGTTTTGTTTTAGATACTGCAAACAATTTAGCAGTG

ompB_RconJC480_MN581995.1 CCGGTAGTTTTAACGGTTTTGTTTTAGATACTGCAAACAATTTAGCAGTG
ompB_Rslovaca13-B_AF123723.2 CCGGTAGTTTTAACGGTTTTGTTTTAGATACTGCAAACAATTTAGCAGTG

ompB_SL94_MZ970572 GCAGTGAGTGAAGATACTACCTTAGGGTTCATCACTAATACTGTTAATAA
ompB_RconJC480_MN581995.1 GCAGTGAGTGAAGATACTACCTTAGGGTTCATCACTAATACTGTTAATAA
ompB_Rslovaca13-B_AF123723.2 ACAGTGAGTGAAGATACTACCTTAGGGTTCATCACTAATGTGTTAATAA

ompB_SL94_MZ970572 CGCTAACTTCTTTAACCTTACGCTTCATGCCGGTAAAACCTTACTATAA
ompB_RconJC480_MN581995.1 CGCTAACTTCTTTAACCTTACGCTTCATGCCGGTAAAACCTTACTATAA
ompB_Rslovaca13-B_AF123723.2 CGCTAACTTCTTTAACCTTACGCTTAATGCCGGTAAAACCTTACTATAA

ompB_SL94_MZ970572 CAGGTCAAGGTATTACTAATGCACAAGCTGCTGCTACAAAAAATGTTCAA
ompB_RconJC480_MN581995.1 CAGGTCAAGGTATTACTAATGCACAAGCTGCTGCTACAAAAAATGTTCAA
ompB_Rslovaca13-B_AF123723.2 CAGGTCAAGGTATTACTAATGCACAAGCTGCTGCTACAAAAAATGCTCAA

ompB_SL94_MZ970572 AATCTTGTTGTACAATTTAATAATGGTGTGCTATTGACAATAATGATCT
ompB_RconJC480_MN581995.1 AATCTTGTTGTACAATTTAATAATGGTGTGCTATTGACAATAATGATCT
ompB_Rslovaca13-B_AF123723.2 AATCTTGTTGTACAATGTAATAATGGTGTGCTATTGCAATAATGATCT
*** *****

ompB_SL94_MZ970572 TAAAGGTGTAGGAAGAATAGACTGCGGTGCTGCGGCTTCTACATTAGTAT
ompB_RconJC480_MN581995.1 TAAAGGTGTAGGAAGAATAGACTGCGGTGCTGCGGCTTCTACATTAGTAT
ompB_Rslovaca13-B_AF123723.2 TAAAGGTGTAGGAAGCATAGACTTCGGGTGCTGCGGCTTCTACATTAGTAT

ompB_SL94_MZ970572 TTAATTTAGCAAATCCTACAACCTCAAAAAGCTCCTCTTATACTTGGAGAT
ompB_RconJC480_MN581995.1 TTAATTTAGCAAATCCTACAACCTCAAAAAGCTCCTCTTATACTTGGAGAT
ompB_Rslovaca13-B_AF123723.2 TTAATTTAGCAAATCCTACAACCTCAAAAAGCTCCTCTTATACTTGGAGAT

ompB_SL94_MZ970572 AATGCTGTAATAGTGAATGGTGTGCTAACGGTACATTAATGTTACTAATGG
ompB_RconJC480_MN581995.1 AATGCTGTAATAGTGAATGGTGTGCTAACGGTACATTAATGTTACTAATGG
ompB_Rslovaca13-B_AF123723.2 AATGCTTGAATAGTGAATGGTGTGCTAACGGTACATTAATGTTACTAATGG

ompB_SL94_MZ970572 ATTTATTCAAGTTTCAAATAAAAAGTTTTGCTACTGTTAATGCAATTAATA
ompB_RconJC480_MN581995.1 ATTTATTCAAGTTTCAAATAAAAAGTTTTGCTACTGTTAATGCAATTAATA
ompB_Rslovaca13-B_AF123723.2 ATTTATTCAAGTTTCAAATAAAAAGTTTTGCTACTGTTAATGCAATTAATA

ompB_SL94_MZ970572 TCGGTGACGGTCAAGGTATCATGTTCAATACTGATGCTGATAATGCTAAT
ompB_RconJC480_MN581995.1 TCGGTGACGGTCAAGGTATCATGTTCAATACTGATGCTGATAATGCTAAT
ompB_Rslovaca13-B_AF123723.2 TCGGTGACGGTCAAGGTATCATGTTCAATACTGATGCTAATAATGCTAAT

ompB_SL94_MZ970572 ACTTTAAATTTACAAGCAAATGGTACTACTATTAATTTTAAATGGAACAGA
ompB_RconJC480_MN581995.1 ACTTTAAATTTACAAGCAAATGGTACTACTATTAATTTTAAATGGAACAGA
ompB_Rslovaca13-B_AF123723.2 ACTTTAAATTTACAAGCAAGTGGTACTACTATTAATTTTAAATGGAACAGA

ompB_SL94_MZ970572 CGG-----
ompB_RconJC480_MN581995.1 CGGTACGGGTAGATTAGTATTATTAAGTAAGAATGCTGCTGCTACCGACT
ompB_Rslovaca13-B_AF123723.2 CGGTACGGGTAGATTAGTATTATTAAGTAAGAATGCTGCTGCTACCGACT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TTAACGTTACAGGAAGTTTTAGGCGGTAATCTAAAAGGTATTATCGAATTT
ompB_Rslovaca13-B_AF123723.2 TTAACGTTACAGGAAGTTTTAGGCGGTAATCTAAAAGGTATTATCGAATTT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 AACACTGTTGCAGTAAACGGTCAACTTAAAGCTAATGCAGGCCCTGCTAA
ompB_Rslovaca13-B_AF123723.2 AACACTGTTGCAGTAAACGGTCAACTTAAAGCTAATGCAGGCCCTGCTAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TGCAGTAATAGGTACTAATAATGGCGCAGGTAGAGCTGCAGGATTTGTTG
ompB_Rslovaca13-B_AF123723.2 TGCAGTAATAGGTACTAATAATGGCGCAGGTAGAGCTGCAGGATTTGTTG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TTAGCGTAGATAATGGTAAGGTAGCAACAATCGATGGACAAGTTTATGCT
ompB_Rslovaca13-B_AF123723.2 TTAGCGTAGATAATGGTAAGGTAGCAACAATCGATGGACAAGTTTATGCT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 AAAGACATGGTTATACAAAGTGCTAATGCAGCTGGACAAGTAAATTTTGG
ompB_Rslovaca13-B_AF123723.2 AAAGACATGGTTATACAAAGTGCTAATGCAGCTGGACAAGTAAATTTTGG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 ACACATAGTTGACGTTGGTACAGACGGTACTACTGCCTTTAAAACAGCAG
ompB_Rslovaca13-B_AF123723.2 ACACATAGTTGACGTTGGTACAGACGGTACTACTGCCTTTAAAACAGCAG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CTCTAAAGTTGCAATAACCCAAAACCTCAAACCTTTGGTACTACTGATTTTC
ompB_Rslovaca13-B_AF123723.2 CTCTAAAGTTGCAATAACCCAAAACCTCAAACCTTTGGTACTACTGATTTTC

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GGTAATCTTGCAGCACAGATTACAGTTCCCTAATAATATGACCCTTACCGG
ompB_Rslovaca13-B_AF123723.2 GGTAATCTTGCAGCACAGATTACAGTTCCCTAATAATATGACCCTTACCGG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TAATTTTACAGGTGATGCTAGCAATCCCGGTAATACTGCAGGTGTGATAA
ompB_Rslovaca13-B_AF123723.2 TAATTTTACAGGTGATGCTAGCAATCCCGGTAATACTGCAGGTGTGATAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CTTTTAATGCTAACGGTACTTTAGCAAGTGCTAGTGCAGATGCAAATGTT
ompB_Rslovaca13-B_AF123723.2 CTTTTAATGCTAACGGTACTTTAGCAAGTGCTAGTGCAGATGCAAATGTT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GCGGTGACAAATAATATTACAGCAATTGAAGCATCAGGTGCCGGAGTTGT
ompB_Rslovaca13-B_AF123723.2 GCGGTGACAAATAATATTACAGCAATTGAAGCATCAGGTGCCGGAGTTGT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CCAATTATCAGGAACACATGCTGCCGAGTTACGTTTAGGAAATGCCGGTT
ompB_Rslovaca13-B_AF123723.2 CCAATTATCAGGAACACATGCTGCCGAGTTACGTTTAGGAAATGCCGGTT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CTGTCTTTAACTTGCTGACGGTACAGTTATAAACGGTAAAGTTAACCAA
ompB_Rslovaca13-B_AF123723.2 CTGTCTTTAACTTGCTGACGGTACAGTTATAAACGGTAAAGTTAACCAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 ACTGCTCTTGTGCGCGGTGTTCTTGCAGCCGGTGCTATTACCTTAGACGG

```
ompB_Rslovaca13-B_AF123723.2      ACTGCTCTTGTGCGCCGGTGTCTTGCAGCCGGTGTCTATTACCTTAGACGG
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
TAGTGCTACAATTACCGCGATATAGGGAACGCTGGTGGTGTGCTGCGT
TAGTGCTACAATTACCGCGATATAGGGAACGCTGGTGGTGTGCTGCGT
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
TACAAGGCATTACTTTAGCTAACGATGCTACAAAAACATTAACACTTGGT
TACAAGGCATTACTTTAGCTAACGATGCTACAAAAACATTAACACTTGGT
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
GGAGCAAATATTATCGGTGCTAATGGTGGAACGATTGATTTCCAAGCTAA
GGAGCAAATATTATCGGTGCTAATGGTGGAACGATTGATTTCCAAGCTAA
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
CGGTGGTACTATTAAATTAACAAGCACTCAAATAATATTGTAGTTGATT
CGGTGGTACTATTAAATTAACAAGCACTCAAATAATATTGTAGTTGATT
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
TTGATTTAGCTATAACTACTGATCAAACAGGCGTTGTTGATGCGAGTAGC
TTGATTTAGCTATAACTACTGATCAAACAGGCGTTGTTGATGCGAGTAGC
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
CTAACAAATGCTCAAACCTTTAAATATTAACGGTAAAATCGGTACTATTGG
CTAACAAATGCTCAAACCTTTAACTATTAAACGGTAAAATCGGTACTATTGG
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
AGCTAATAATAAACTCTTGGACAATTTAATATTGGCTCAAGTAAAACAG
AGCTAATAATAAACTCTTGGACAATTTAATATTGGCTCAAGTAAAACAG
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
CTTTAAGTGACGGTAATGTTGCTATTAACGAGTTAGTTATTGGAAATAAC
CTTTAAGTAAACGGTAATGTTGCTATTAACGAGTTAGTTATTGGAAATAAC
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
GGTGAGTACAATTTCGCTCATAATACTTATTTAATAACAAGAACTACAAA
GGTGAGTACAATTTCGCTCATAATACTTATTTAATAACAAGAACTACAAA
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
TGCTGCCGGTCAAGGTAAAATAATATTTAATCCTGTTGTAATGGTAATA
TGCTGCCGGTCAAGGTAAAATAATATTTAATCCTGTTGTAATAATAATA
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
CAACTCTTGCAGCCGGTACAAATTTAGGTAGTGCTACAAATCCACTTGCA
CAACTCTTGCAGCCGGTACAAATTTAGGTAGTGCTACAAATCCACTTGCA
*****

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2      -----
GAAATTAATTTTGGATCTAAAGGGGTTAATGTTGATACTGTATTAAATGT
GAAATTAATTTTGGATCTAAAGGGGTTAATGTTGATACTGTATTAAATGT
*****
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ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TGGTGAAGGTGTAATTTATATGCTACTAATATTACTACTACCGATGCTA
TGGTGAAGGTGTAATTTATATGCTACTAATATTACTACTACCGATGCTA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

ACGTAGGTTCTTTTCATCTTTAATGCCGGTGAACAAATATAGTAAGCGGT
ACGTAGGTTCTTTTCATCTTTAATGCCGGTGAACAAATATAGTAAGCGGT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

ACAGTCCGGTGGACAGCAAGGTAATAAGTTTAACTGTAGCATTAGGTAA
ACAGTCCGGTGGACAGCAAGGTAATAAGTTTAACTGTAGCATTAGATAA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

CGGTACTACTGTTAAGTTCTTAGGTAATGCAACATTTAACGGTAACACTA
CGGTACTACTGTTAAGTTCTTAGGTAATGCAACATTTAACGGTAACACTA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

CAATTGCAGCTAATTCTACCTTACAAATCGGTGGTAACACTATACTGCAGAC
CAATTGCAGCTAATTCTACCTTACAAATCGGTGGTAACACTATACTGCAGAC

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TTTGTTGCATCTGCCGATGGTACCGGTATAGTAGAATTCGTTAACACCGG
TTTGTTGCATCTGCCGATGGTACCGGTATAGTAGAATTCGTTAACACCGG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TCCTATTACCGTAAACATTAACAACAAGCTGCACCTGTTGTTAATGCTT
TCCTATTACCGTAAACATTAACAACAAGCTGCACCTGTTAATGCTT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TAAAACAATAACCGTTTCTGGTCCCGGTGACGTAGTGATTAATGAGATA
TAAAACAATAACCGTTTCTGGTCCCGGTACGTAGTGATTAATGAGATA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GGTAATGCAGGTAATTATCATGGTGCCGTGACTGATACGATTGCTTTTGA
GGTAATGCAGGTAATTATCATGGTGCCGTGACTGATACGATTGCTTTTGA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AAATTCAAGTTTAGGTGCAGTTGTATTCTTACCTAGAGGCATTCCATTCA
AAATTCAAGTTTAGGTGCAGTTGTATTCTTACCTAGAGGCATTCCATTCA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

ATGATGCAGGCAACATAATTCCTTTAACAATTTAAAAGTACCGTAGGTAAT
ATGATGCAGGCAACATAATTCCTTTAACAATTTAAAAGTACCGTAGGTAAT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AAAAACAGCTACAGGTTTTAATGTTCTTAGCGTGGTTGTTTTAGGTGTTGA
AAAAACAGCTACAGGTTTTAATGTTCTTAGCGTGGTTGTTTTAGGTGTTGA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TAGTGTCATCGCTGACGGTCAAGTAATCGGTGATCAAATAATATCGTAG
TAGTGTCATCGCTGACGGTCAAGTAATCGGTGATCAAATAATATCGTAG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GTCTAGGTCTTGGAAAGCGATAACGACATAATCGTTAATGCTACTACATTA
GTCTAGGTCTTGGAAAGCGATAACGACATAATCGTTAATGCTACTACATTA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TATGCAGGTATCGGTACTATAAAACAATAATCAAGGTACTGTCACACTTAG
TATGCAGGTATCGGTACTATAAAACAATAATCAAGGTACTGTCACACTTAG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

CGGTGGTATTCCTAATACCCCTGGTACAGTTTATGGCTTAGGCACAGGTA
CGGTGGTATTCCTAATACCCCTGGTACAGTTTATGGCTTAGGCACAGGTA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TTGGCGCTTCAAAGTTCAAGCAAGTAACGTTTACTACAGACTATAACAAC
TTAGCCCTTCAAAGTTCAAGCAAGTAACGTTTACTACAGACTATAACAAC
* * * * *

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TTAGGTAATATATTGCAACTAACGCAACAATTAATGACGGTGTAAGTGT
TTAGGTAATATATTGCAACTAACGCAACAATTAATGACGGTGTAAGTGT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TACTACAGGCGGTATAGCCGGAACAGGTTTTGACGGTAAAATTACTCTTG
TACTACAGGCGGTATAGCCGGAACAAGTTTTAACGGTAAAATTACTCTTG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GAAGTGTTAACGGTAACGGTAATGTAAGATTTGCTGACGGTATATTGTCT
GAAGTGTTAACGGTAACGGTAATGTAAGATTTGCTGACGGTATATTGTCT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AATTCTACAAGTATGATTGGTACTACTAAGGCTAATAATGGTACTGTAAC
AATTCTACAAGTATGATTGGTACTACTAAGCTAATAATGGTACTGTAAC

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TTATTTAGGTAATGCATTTCGTCGGTAATATAGGTGATTCAGATACTCCTG
TTATTTAGGTAATGCATTTCGTCGGTAATATAGGTGATTCAGATACTCCTG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TAGCTTCTGTTAGATTTACAGGTAGTGATGATGGTGCAGGATTACAAGGA
TAGCTTCTGTTAGATTTACAGGTAGTGATGATGGTGCAGGATTACAAGGA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AATATTTATTACAAGTCATAGACTTTGGTACTTATAACTTAGGTATTTT
AATATTTATTACAAGTCATAGACTTTGGTACTTATAACTTAGGTATTTT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AAATTCTAATGTAATTTTAGGCGGCGGTACTACTGCTATTAACGGTAAAA
AAATTCTAATGTAATTTTAGGCGGCGGTACTACTGCTATTAACGGTAAAA

ompB_SL94_MZ970572

ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2
TCAATCTTCTTACAAATACTTTAACATTTGCAAGTGGTACTTCAACATGG
TCAATCTTCTTACAAATACTTTAACATTTGCAAGTGGTACTTCAACATGG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GGAAACAATACTTCTATTGAAACTACTTTAACATTAGCAAACGGTAATGT
GGAAACAATACTTCTATTGAAACTACTTTAACATTAGCAAACGGTAATAT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AGGTCACATCGTTATCTTGGAAAGGTGCGCAAGTTAATGCAACAACCACAG
AGGTCACATCGTTATCTTGGAAAGGTGCAACAAGTTAATGCAACAACCACAG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GAATTACAACCATTAAAGTACAAGATAATGCCAATGCAAATTTTCAGTGGT
GAATACAACCATTAAAGTACAAGATAATGCCAATGCAAATTTTCAGTGGT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

ACACAAACTTATACTTTAATCCAAGGTGGTGTAGATTTAACGGTACTTT
ACACAAACTTATACTTTAATCCAAGGTGGTGTAGATTTAACGGTACTTT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

AGGAGGTCCCAACTTTGCTGTAAACCGGAAGTAATCGTTTCGTAAATTACG
AGGAGGTCCCAACTTTGCTGTAAACCGGAATAATCGTTTCGTAAATTACG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GTTTAATACGTGCTGCTAACCAAGATTATGTAATAACACGTACTAACAAT
GTTTAATACGTGCTGCTAACCAAGATTATGTAATAACACGTACTAACAAT

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

GCAGAAAACGTAGTTACTAATGATATCGCAAATAGTCCGTTTGGAGGTGC
GCAGAAAACGTAGTTACTAATGATATCGCAAATAGTCCGTTTGGAGGTGC

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

ACCGGGTGTAGGTCAGAACGTTACAACATTTGTAATGCAACTGATACTG
ACCGGGTGTAGGTCAGAACGTTACAACATTTGTAATGCAACTAATACTG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

CAGCATATAATAATCTTCTTTTAGCTAAAAATAGTGCTAATCTGCTAAC
CAGCATATAATAATCTTCTTTTAGCTAAAAATAGTGCTAATCTGCTAAC

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

TTTGTTGGAGCTATCGTTACCGATAACAAGTGGCCGTAACATAATGCACA
TTTGTTGGAGCTATCGTTACCGATAACAAGTGGCCATAACTAATGCACA

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

ATTAGATGTAGCTAAAGATATTCAGCTCAACTTGGTAACAGATTAGGTG
ATTAGATGTAGCTAAAGATATTCAGCTCAACTTGGTAACAGATTAGGTG

ompB_SL94_MZ970572
ompB_RconJC480_MN581995.1
ompB_Rslovaca13-B_AF123723.2

CTCTTAGATATTTAGGTACTCTGAAACTGCTGAAATGGCTGGACCTGAA
CTCTTAGATATTTAGGTACTCTGAAACTGCTGAAATGGCTGGACCTGAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GCTGGAGCAATACCGGCTGCGGTTGCTGCAGGTGACGAGGCTGTTGATAA
ompB_Rslovaca13-B_AF123723.2 GCTGGAGCAATACCGGCTGCGGTTGCTGCAGGTGACGAGGCTGTTGATAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TGTAGCTTACGGTATATGGGCAAACCTTTCTATACTGATGCGCATCAAA
ompB_Rslovaca13-B_AF123723.2 TGTAGCTTACGGTATATGGGCAAACCTTTCTATACTGATGCAATCAAA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GTAAGAAAGGTGGTTTAGCTGGTTATAAAGCTAAAACCACCGGTGTCGTA
ompB_Rslovaca13-B_AF123723.2 GTAAGAAAGGTGGTTTAGCTGGTTATAAAGCTAAAACCACCGGTGTCGTA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 ATCGGTTTAGATACGCTAGCTAACGATAACTTAATGATCGGTGCTGCTAT
ompB_Rslovaca13-B_AF123723.2 ATCGGTTTAGATACGCTAGCTAACGATAACTTAATGATCGGTGCTGCTAT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CGGTATCACTAAAAGTATATAAAAACACCAAGATTATAAGCAAGGTGATA
ompB_Rslovaca13-B_AF123723.2 CGGTATCACTAAAAGTATATAAAAACACCAAGATTATAAGCAAGGTGATA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 AAACCGACGTTAACGGTTTCTCATTCTCTTATATGGTGCCAGCAGCTT
ompB_Rslovaca13-B_AF123723.2 AAACCGACGTTAACGGTTTCTCATTCTCTTATATGGTGCCAGCAGCTT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GTTAAGAAGTCTTTGCTCAAGGTAGTGCAATATTTAGCTTAAACCAAGT
ompB_Rslovaca13-B_AF123723.2 GTTAAGAAGTCTTTGCTCAAGGTAGTGCAATATTTAGCTTAAACCAAGT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GAAGAACAAGTACGCGTTACTTCTTCGATGCTAACGGTAAATATGAGCA
ompB_Rslovaca13-B_AF123723.2 GAAGAACAAGTACGCGTTACTTCTTCGATGCTAACGGTAAATATGAGCA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 AGCAAATTGCTGCCGGTCATTACGATAACATGACATTCGGTGGTAACTTA
ompB_Rslovaca13-B_AF123723.2 AGCAAATTGCTGCCGGTCATTACGATAACATGACATTCGGTGGTAACTTA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 ACAGTCGGTTATGATTACAATGCAATGCAAGGTGTGTTAGTAACTCCAAT
ompB_Rslovaca13-B_AF123723.2 ACAGTCGGTTATGATTACAATGCAATGCAAGGTGTGTTAGTAACTCCAAT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GGCAGGACTTAGTACTTAAAGTCTTCTGACGAAAACCTACAAAGAAACCG
ompB_Rslovaca13-B_AF123723.2 GGCAGGACTTAGTACTTAAAGTCTTCTGACGAAAACCTACAAAGAAACCG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GTACAACAGTTGCAAACAAGCAAGTTAACAGCAAATTTAGCGATAGAACC
ompB_Rslovaca13-B_AF123723.2 GTACAACAGTTGCAAACAAGCAAGTTAACAGCAAATTTAGCGATAGAACC

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GATTTAATAGTAGGTGCTAAAGTAGCCGGTAGTACTATGAACATAACTGA

ompB_Rslovaca13-B_AF123723.2 GATTTAATAGTAGGTGCTAAAGTAGCCGGCAGTACTATGAACATAACTGA

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TCTTGCGGTATATCCGGAAGTTCACGCTTTTGTGGTTCACAAAGTAACCG
ompB_Rslovaca13-B_AF123723.2 TCTTGCGGTATATCCGGAAGTTCACGCTTTTGTGGTTCACAAAGTAACCG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GTAGATTATCTAAAACCTCAGTCTGTATTAGACGGACAAGTTACTCCGTGT
ompB_Rslovaca13-B_AF123723.2 GTAGATTATCTAAAACCTCAGTCTGTATTAGACGGACAAGTTACTCCGTGT

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 ATCAGCCAGCCTGATAGAACCCTAAAACATCTTATAATTTAGGTTAAG
ompB_Rslovaca13-B_AF123723.2 ATCAGCCAGCCTGACAGAACCCTAAAACATCTTATAATTTAGGTTAAG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 TGCAAGCATTAGATCTGATGCTAAGATGGAGTACGGAATCGGTTACGATG
ompB_Rslovaca13-B_AF123723.2 TGCAAGCATAGATCTGATGCTAAGATGGAGTACGGAATCGGTTACGATG

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 CTCAGATTTCAAGTAAATATACTGCACATCAAGGTACTCTAAAAGTCCGT
ompB_Rslovaca13-B_AF123723.2 CTCAGATTTCAAGTAAATATACTGCACATCAAGGTACTCT-----

ompB_SL94_MZ970572 -----
ompB_RconJC480_MN581995.1 GTAAACTTCTAA
ompB_Rslovaca13-B_AF123723.2 -----

gltA alignment

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 -----TGATTGAGAATTTGCTGAATTAATAATCAG
gltA_RslovacaD-CWPP_CP003375.1 ATGACCAATGAAAATAATAATGATTGAGAATTTGCTGAATTAATAATCAG
gltA_RendosymbMeppadi_MF405463 -----

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 AGGAAAAATATTTAAATTACCTATACTTAAAGCAAGTATCGGTGAGGATG
gltA_RslovacaD-CWPP_CP003375.1 AGGAAAAATATTTAAATTACCTATACTTAAAGCAAGTATCGGTGAGGATG
gltA_RendosymbMeppadi_MF405463 -----

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 TAATCGATATAAGTAGGGTATCTGCGGAAGCCGATTGCTTTACTTACGAT
gltA_RslovacaD-CWPP_CP003375.1 TAATCGATATAAGTAGGGTATCTGCGGAAGCCGATTGCTTTACTTACGAT
gltA_RendosymbMeppadi_MF405463 -----

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 CCGGGTTTTATGTCTACTGCTTCTTGTCTAGTCTACTATCACCTATATAGA
gltA_RslovacaD-CWPP_CP003375.1 CCGGGTTTTATGTCTACTGCTTCTTGTCTAGTCTACTATCACCTATATAGA
gltA_RendosymbMeppadi_MF405463 -----

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

CGGTGATAAAGGAATCTTGCGGCATCGAGGATATGATATTAAGACTTAG
CGGTGATAAAGGAATCTTGCGGCATCGAGGATATGATATTAAGACTTAG

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

CTGAGAAAAGTGATTTTTTAGAAGTGGCATATTTACTGATTTATGGGGAA
CTGAGAAAAGTGATTTTTTAGAAGTGGCATATTTACTGATTTATGGGGAA

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

CTACCAAGTGGCGAGCAGTATAATAATTTCACTAAACAGGTTGCTCATCA
CTACCAAGTGGTGGAGCAGTATAATAATTTCACTAAACAGGTTGCTCATCA

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

TTCATTAGTGAATGAAAGATTACACTATTTATTTCAAACCTTTTGTAGCT
TTCATTAGTGAATGAAAGATTACACTATTTATTTCAAACCTTTTGTAGCT

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

CTTCTCATCCTATGGCTATTATGCTTGC GGCTGTTCGGTTCTCTTTCGGCA
CTTCTCATCCTATGGCTATTATGCTTGC GGCTGTTCGGTTCTCTTTCGGCA

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

TTTTATCCTGATTTATTGAATTTTAAGGAAGCAGATTACGAACCTACCGC
TTTTATCCTGATTTATTGAATTTTAAGGAAGCAGATTACGAACCTACCGC

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

TATTAGAATGATTGCTAAGATACCTACCATCGCTGCAATGTCTTATAAAT
TATTAGAATGATTGCTAAGATACCTACCATCGCTGCAATGTCTTATAAAT

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

ATTCTATAGGACAACCGTTATTTATCCTGATAATTCGTTAGATTTTACC
ATTCTATAGGACAACCGTTATTTATCCTGATAATTCGTTAGATTTTACC

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

GAAAATTTTCTGCATATGATGTTTGC AACGCCTTGACGAAATATACAGT
GAAAATTTTCTGCATATGATGTTTGC AACGCCTTGACGAAATATACAGT

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

AAATCCAATAATAAAAAATGCTCTTAATAAGATATTTATCCTACATGCCG
AAATCCAATAATAAAAAATGCTCTTAATAAGATATTTATCCTACATGCCG

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

ATCATGAGCAGAATGCTTCTACTTCAACAGTCCGAATTGCCGGCTCATCC
ATCATGAGCAGAATGCTTCTACTTCAACAGTCCGAATTGCCGGCTCATCC

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

GGAGCTAACCCCTTTTGCCTGTATTAGCACGGGTATTGCCTCACTTTGGGG
GGAGCTAACCCCTTTTGCCTGTATTAGCACGGGTATTGCCTCACTTTGGGG

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

GGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
ACCTGCTCACGGCGGGGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
ACCTGCTCACGGCGGGGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
ACCTGCTCACGGCGGGGCTAATGAAGCGGTAATAAATATGCTTAAAGAAA
-----A

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

TCGGTAGTTCTGAGTATATTCCTAAATATATAGCGAAAGCTAAGGATAAA
TCGGTAGTTCTGAGTATATTCCTAAATATATAGCGAAAGCTAAGGATAAA
TCGGTAGTTCTGAGTATATTCCTAAATATATAGCGAAAGCTAAGGATAAA
TCGGTAGTTCTGAGTATATTCCTAAATATATAGCTAAAGCTAAGGATAAA
TCGGTAGTTCTGAGTATATTCCTAAATATATAGCTAAAGCTAAGGATAAA
-----A

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
AATGATCCATTTAGATTAATGGGTTTTGGTCATCGTGTATATAAAAACTA
-----A

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
TGACCCGCGTGCCGCAGTACTTAAAGAAACGTGCAAAGAAGTATTAAGG
-----A

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
AACTCGGGCAGCTAGACAACAATCCGCTCTTACAAATAGCAATAGAACTT
-----A

gltA_SL94_MZ970594
gltA_RendosymbRhhaem_KU895508.
gltA_RconJC480_MN581991.1
gltA_RslovacaD-CWPP_CP003375.1
gltA_RendosymbMeppadi_MF405463

GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
GAAGCTATCGCTCTTAAAGATGAATATTTTATTGAGAGAAAATTATATCC
-----A

gltA_SL94_MZ970594 AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTATGGGTATACCGT
gltA_RendosymbRhhaem_KU895508. AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTATGGGTATACCGT
gltA_RconJC480_MN581991.1 AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTATGGGTATACCGT
gltA_RslovacaD-CWPP_CP003375.1 AAATGTTGATTTTTATTTCGGGTATTATCTATAAAGCTATGGGTATACCGT
gltA_RendosymbMeppadi_MF405463 *****

gltA_SL94_MZ970594 CGCAAA-----
gltA_RendosymbRhhaem_KU895508. CGCAAATGTTTCACGTGACTTTTTGCAAT-----
gltA_RconJC480_MN581991.1 CGCAAATGTTTCACGGTACTTTTTGCAATAGCAAGAACCGTAGGCTGGATG
gltA_RslovacaD-CWPP_CP003375.1 CGCAAATGTTTCACGGTACTTTTTGCAATAGCAAGAACCGTAGGCTGGATG
gltA_RendosymbMeppadi_MF405463 CGCAAATGT-----

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 GCACAATGGAAAGAAATGCACGAAGACCCCTGAACAAAAATCAGCAGACC
gltA_RslovacaD-CWPP_CP003375.1 GCACAATGGAAAGAAATGCACGAAGACCCCTGAACAAAAATCAGCAGACC
gltA_RendosymbMeppadi_MF405463 -----

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 TAGA-----
gltA_RslovacaD-CWPP_CP003375.1 TAGACAGCTTTACACCGTTATGTACATAGAGAGTATAAGGGTATTCGGG
gltA_RendosymbMeppadi_MF405463 -----

gltA_SL94_MZ970594 -----
gltA_RendosymbRhhaem_KU895508. -----
gltA_RconJC480_MN581991.1 -----
gltA_RslovacaD-CWPP_CP003375.1 AGAGGTAA
gltA_RendosymbMeppadi_MF405463 -----

sca4 alignment

sca4_SL94_MZ970562 -----
sca4_Rslovaca_D-CWPP_CP003375.1 ATGAGTAAAGACGGTAACCTAGATACAAGTGAATTTGATCCTTTAGCAA
sca4_RconJC480_MN581999.1 -----

sca4_SL94_MZ970562 -AAGGAATATACAGAAGAACAAAAGCAAACATTAGAACAAGAGCAAAAAG
sca4_Rslovaca_D-CWPP_CP003375.1 TAAGGAATATACAGAAGAACAAAAGCAAACATTAGAACAAGAGCAAAAAG
sca4_RconJC480_MN581999.1 -----AGAACAAGAGCAAAAAG

sca4_SL94_MZ970562 AATTTTTATCTCAAAC TACAACCC CAGCACTAGAAAGCTGACGATGGTTTT
sca4_Rslovaca_D-CWPP_CP003375.1 AATTTTTATCTCAAAC TACAACCC CAGCACTAGAAAGCTGACGATGGTTTT
sca4_RconJC480_MN581999.1 AATTTTTATCTCAAAC TACAACCC CAGCACTAGAAAGCTGACGATGGTTTT

sca4_SL94_MZ970562 ATCGTTGCTTCTGCATCTTCTGCTCAATCTACCCCTTCAATGAGTGCTTT
sca4_Rslovaca_D-CWPP_CP003375.1 ATCGTTGCTTCTGCATCTTCTGCTCAATCTACCCCTTCAATGAGTGCTTT
sca4_RconJC480_MN581999.1 ATCGTTGCTTCTGCATCTTCTGCTCAATCTACCCCTTCAATGAGTGCTTT

sca4_SL94_MZ970562 ATCGGGCAATATCTCTCCTGACAGTCAGACATCAGACCAATAACCAAGG
sca4_Rslovaca_D-CWPP_CP003375.1 ATCGGGCAATATCTCTCCTGACAGTCAGACATCAGACCAATAACCAAGG
sca4_RconJC480_MN581999.1 ATCGGGCAATATCTCTCCTGACAGTCAGACATCAGACCAATAACCAAGG

sca4_SL94_MZ970562 CTGTAAGAGAAAACAATTATACAACCGCAAAAAGATAAATTTAATAGAACAA
sca4_Rslovaca_D-CWPP_CP003375. CTGTAAGAGAAAACAATTATACAACCGCAAAAAGATAAATTTAATAGAACAA
sca4_RconJC480_MN581999.1 CTGTAAGAGAAAACAATTATACAACCGCAAAAAGATAAATTTAATAGAACAA

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sca4_Rslovaca_D-CWPP_CP003375. ATATTAAAAGACCTGGCAGCCCTTACAGACCGTGATTTAGCTGAACAAAA
sca4_RconJC480_MN581999.1 ATATTAAAAGACCTGGCAGCCCTTACAGACCGTGATTTAGCTGAACAAAA

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sca4_Rslovaca_D-CWPP_CP003375. AAGAAAAGAAATAGAAGAAGAAAAGAAAAGATAAAACATTAAGTACTT
sca4_RconJC480_MN581999.1 AAGAAAAGAAATAGAAGAAGAAAAGAAAAGATAAAACATTAAGTACTT

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sca4_Rslovaca_D-CWPP_CP003375. TTTTCGGTAATCCGGCTAATAGAGAATTTATTGATAAGGCTTTAGAAAAAT
sca4_RconJC480_MN581999.1 TTTTCGGTAATCCGGCTAATAGAGAATTTATTGATAAGGCTTTAGAAAAAT

sca4_SL94_MZ970562 CCTGAGCTTAAAAAGAAATTAGAATCAATAGAAATAGCCGGCTATAAAAA
sca4_Rslovaca_D-CWPP_CP003375. CCTGAGCTTAAAAAGAAATTAGAATCAATAGAAATAGCCGGCTATAAAAA
sca4_RconJC480_MN581999.1 CCTGAGCTTAAAAAGAAATTAGAATCAATAGAAATAGCCGGCTATAAAAA

sca4_SL94_MZ970562 TGTGCATAATACATTTAGCGCCGCTAGTGGATACCCCTGGTGGATTTAAAC
sca4_Rslovaca_D-CWPP_CP003375. TGTGCATAATACATTTAGCGCCGCTAGTGGATACCCCTGGTGGATTTAAAC
sca4_RconJC480_MN581999.1 TGTGCATAATACATTTAGCGCCGCTAGTGGATACCCCTGGTGGATTTAAAC

sca4_SL94_MZ970562 CGGTACAGTGGGAAAATCACGTAAGTGCAAGCGATCTTAGAGCAACAGTA
sca4_Rslovaca_D-CWPP_CP003375. CGGTACAGTGGGAAAATCACGTAAGTGCAAGCGATCTTAGAGCAACAGTA
sca4_RconJC480_MN581999.1 CGGTACAGTGGGAAAATCACGTAAGTGCAAGCGATCTTAGAGCAACAGTA

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sca4_Rslovaca_D-CWPP_CP003375. GTTAAAAATGATGCAGGTGATGAACTCTGTACCTTAAATGAAACAACCTGT
sca4_RconJC480_MN581999.1 GTTAAAAATGATGCAGGTGATGAACTCTGTACCTTAAATGAAACAACCTGT

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sca4_RconJC480_MN581999.1 TCAGCTCATATAGGGAAATAGATTTTCCCTATAAAACTTGATAAAGCCGAT

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sca4_Rslovaca_D-CWPP_CP003375. GGGTCAATGCATTTATCGATGGTAGCATTAAAAGCTGATGGCACAAGCC
sca4_RconJC480_MN581999.1 GGGTCAATGCATTTATCGATGGTAGCATTAAAAGCTGATGGCACAAGCC

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sca4_Rslovaca_D-CWPP_CP003375. CTCCAAAGATAAAGCCGTATATTTCACTGCCCACTACGAAGAAGGACCAA
sca4_RconJC480_MN581999.1 CTCCAAAGATAAAGCCGTATATTTCACTGCCCACTACGAAGAAGGACCAA

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sca4_Rslovaca_D-CWPP_CP003375. ACGGTAAACCTCAACTTAAAGAAATAAGCTCACAAAACCTTTAAAATTT
sca4_RconJC480_MN581999.1 ACGGTAAACCTCAACTTAAAGAAATAAGCTCACAAAACCTTTAAAATTT

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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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GCCGGAACCGGAGATGACGCAATAGCTTATATAGAGCATGGTGGAGAAAT
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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TTATACACTTGCGGTAACACGCGGTAAATATAAAGAAATGATGAAGGAGG
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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ATAATAGGACAAGGACAAAGTAAGGAACAACCGCTAATAACTCCACAGCA
*****

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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AACAAACAAGTTCATCGGTTGAACCACCTCAGTATAAACAAACAAGTACCGC
*****

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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CAATTACTCCTACTAACCAACCACTGCAACCTGAGACTTCACAAATGCCA
*****

sca4_SL94_MZ970562
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sca4_RconJC480_MN581999.1
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CAGTCGCAACAAGTGAATCAAATCTTCTTAATGCAGCTACGGCTTTATC
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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AGGCAGCATGCAAGATTTATTAATTATGTAATGCAGGTTTAACAAAAG
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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AAATTGATAGCAATAAACAAATTGATTTAATTAAGAAGCAGCCACGGCA
*****

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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ATTCTTAATAATGAGAAAAGTGATATTGCTGAAAAGCAGGCTAATATCAT
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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TGCTTTAAGCTGAAAATACGGTCAATAATAAAAACCTCAAACCGGATGCAA
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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1
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AAGTAGCTGGAGTCAATGCAGTATTAGAAACCATAAAAAATGATCAGAAT
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sca4_SL94_MZ970562
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sca4_RconJC480_MN581999.1
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ACCCAGCCCTAGAAAAATCAAAAATGCTTGAAGCTACAGTAGCTATCGT

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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TTTAAATTCAGAGAATCTTGAGCCGAGCAAAAACAGCAGATGTTAGAAA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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AGGCAGTAGATGTCGGTTTAAAGTCTTAAAGATGATGCAAGTAGAAGTCA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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GCAATTGACGGTATTAAGGATGTTGTAATAAAAAGTAACCTTTCTACTGA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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AATTAAGCAATGCGGAAAAACAAAAATTATAGGTTCTGTATTAAAG

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sca4_RconJC480_MN581999.1

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AAAGGTGTAGAAGCCCAAGTCTCAGTCCGGCACAACAACAATTGATGCA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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GCAGCATTTAGATAAGATTATGGCAGAACAAAATAAAAAAGATACAATAA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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AAAAAGTAAATGATATTTTGTGTTGATCCTCTAAGTAATACTGAATTA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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AGCAGAAGTCAAAGGCCAAATAATTCAAGAAATTACTAACACAGTTGCAG

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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GAAGCTCGCTTGAAGCTCAAGACAAAGCAGCGATTATAAAGGGGTAGGC

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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GAGACTATAGCTACTCATAGTGATACCTCTTTATCCTTACCTAATAAAGC

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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ACTTATTATGGCATCAGCGGAAAAAGGTATTGCAGAAAGTCAGACCAATT

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

GGCAAAGGAGGTCCTGAAATAACTAAGGCAGTTTCTAGCGGGATCGATAA
GGCAAAGGAGGTCCTGAAATAACTAAGGCAGTTTCTAGCGGGATCGATAA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

TAGTAATATTAATGACTCTGAGAAAGAGGCCTTAAAAAGCTAAAGATG
TAGTAATATTAATGACTCTGAGAAAGAGGCCTTAAAAAGCTAAAGATG

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

CAGCGAGTGAGGCAGCTTTAGATAGAGACTCAAATTTAACTGAAGGG
CAGCGAGTGAGGCCGCTTTAGATAGAGACTCAAATTTAACTGAAGGG

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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TTAAAAGGACAGAATATAGAAGAACACAAGCCTCACGATGATATATATA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

CAAGCTCGAGAAGTAATTAACGCTGTTAATCCTGTTATAGAAGCATTAG
CCAAGCTCGAGAAGTAATTAACGCTGTTAATCCTGTTATAGAAGCATTAG
* *****

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

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AAAAATCTAAAGAACCGGTAGTGTGCGCGAAGAAAGAACTGTACAAGAA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

ACTTCTAGTATATTAATAATATCTCTAAGCTTGCAGTTGAGAAAGTCAA
ACTTCTAGTATATTAATAATATCTCTAAGCTTGCAGTTGAGAAAGTCAA

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

TAATTTTCGTGCTATGCTTCTCCAACCTGGTAACCTTAAACTCTTGAAG
TAATTTTCGTGCTATGCTTCTCCAATGGTAACCTTAAACTCTTGAAG

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

AAAAAAAAGAGGAATCAATAAAAAAGTAGATGAGCTGGTAAGGCATTT
AAAAAAAAGAGGAATCAATAAAAAAGTAGATGAGCTGGTCAAGGCATTT

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.
sca4_RconJC480_MN581999.1

GGTACTAAATCTTCTACTGAAGAACAGCAAAGTTTCATTAAAACATAATT
GGTACTAAATCTTCTACTGAAGAACAGCAAAGTTTCATTAAAACATAATT

sca4_SL94_MZ970562
sca4_Rslovaca_D-CWPP_CP003375.

AATTGATGATAAACTTTATCTAAAGAGGTACGTTTACAACTATAGATA

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sca4_RconJC480_MN581999.1      AATTGATGATAAAACTTTATCTAAAGAGGTACGTTTACAACTATAGATA
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sca4_SL94_MZ970562            -----
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sca4_RconJC480_MN581999.1      GGTTATTACAAGAACAAAAACGAGCAGAAGCAATTGAAAACCTAGTGT
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sca4_SL94_MZ970562            -----
sca4_Rslovaca_D-CWPP_CP003375. AAAACGGAAGATGTAAGGGTAGTATCAGGAAAGTCTAAATTAAAACCTAT
sca4_RconJC480_MN581999.1      AAAACGGAAGATGTAAGGGTAGTATCAGGAAAGTCTAAATTAAAACCCAT
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sca4_SL94_MZ970562            -----
sca4_Rslovaca_D-CWPP_CP003375. AAGTAAAGATAATCCAGATATTGAAAAGCTAAAATGGTAGTAGGAAGAG
sca4_RconJC480_MN581999.1      AAGTAAAGATAATCCAGATATTGACAAAGCCAAAATGGTATTAGGAAGAG
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sca4_SL94_MZ970562            -----
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sca4_RconJC480_MN581999.1      ATAGAGTTAATATCAAACGGAATATAAAAACTATGGGAGCATTAAATG---
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sca4_SL94_MZ970562            -----
sca4_Rslovaca_D-CWPP_CP003375. GCAAGAGATATCATTCAGTCGGAAAATTTAAATAAATCAACACCTATTAA
sca4_RconJC480_MN581999.1      -----

sca4_SL94_MZ970562            -----
sca4_Rslovaca_D-CWPP_CP003375. AAGAGAGTCTTCCCCTCCACAACGCTGA
sca4_RconJC480_MN581999.1      -----

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Supplemental Figure 2: Comparisons of gene sequences of *Rickettsia* SL154 (part A) and *Rickettsia* SL94 (part B) and with the gene sequences of their respective near relatives.