Consensus Frame 1	1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Identity  16S rRNA - Rifp1Sym_ff00010  Frame 1	A GAGTTTGA TCCT GGCTCA GATTGA A CGCGTATGCTTAA C-ACATGCAA GTCGAA CGCGTAA CGCGGA GAGCTTGCTCTCTGGCGACGAGTGGGGGACGGGTGAGTAGGGGGGACACTCGGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAATCTGCCCAGTAATACCGCATAATACCGCATACGCCTACGGGGGAAAGCGGGGACAACTCGGAGAATCTGCCAATACCGCATAATACCGCATACGCCTACGGGGGAAAGCGGGGGAAATCCGAGAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAAATACCGCAAAATCCGAGAAATCCGAAATACCGCAAAATCCGAGAAATCCGAAATACCGCAAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAGAAATCCGAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCGAAATCTGAAATACCGCAAAATCCGAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCGAAATCTGAAATACCGCAAATACCGCGAAATCTGAAATCTGAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCGAAATCTGAAATCTGAAATCTGAAATCTGAAATCTGAAATCTGAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCAAATACCAAATACCAAATACAAATACAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAATACAAAAAA
16S rRNA - Rifp2Sym_fr00030 Frame 1	small subunit ribosomal RNA  A G G M L N - T C K S N G N A E S L L S G D E W R T G E * R V G I C P V V G D N S E K S E L I P H T P Y G G K R G I F G P R A I G * A C V G L A S W W G N
16S rRNA – TevJSym_cg00050 Frame 1	small subunit ribosomal RNA  A G G M L N - T C K S N G N A E S L L S G D E W R T G E * R V G I C P V V G D N S E K S E L I P H T P Y G G K R G I F G P R A I G * A C V G L A S W W G N
16S rRNA – Robidart, NZ_AASF01001544 Frame 1	16S rRNA
16S rRNA – Di Meo Rif9N/18S/Tev9N, REU77478 Frame 1	GGC <mark>CT</mark> A GA TTGA - CGCTG - CGGTATGCTTAA C <mark>A</mark> ACA TGCAA GTCGAACGCGTAA CGCGGA GA GCTTGCTCTCTGGCGACGAGTGGGGGGACGAGTGGGGGGACGAGTGGGGGGACGAGTGGGGGGAAATCCGAGAATCCGAGCAAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATCCGAGAATACCGAGAATCCGAGAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGCAAATACCGAGAAATCCGAGAATACCGAGAATCTGAAATACCGCAAATACCGCAAATACCGCAAATACCGCATAATACCAAATACCGCATAATACCAAATACCAAATACCAAATACCAAATACCAAATACCAAATACAAATACCAAATACCAAATACCAAATACCAAATACAAATACAAATACAAATACAAATACAAATACAAATACAAATACAAATACAAATACAAAATCAAAATACAAAAAA
16S rRNA - Di Meo RifGY-V/GR, REU77480 Frame 1	3 16S rRNA  GCTTAA C-A CA TGCAA GTCGAA CGCGGA GA GCTTGCTCTCTGGCGACGAGTGGCGGA CGGGTGA GTAA CGCGTA GGAA TCTGCCCAGTAGTGGGGGA CAACTCGGAGAATCCGA GCTAATA CCGCATA CGCCCTA CGGGGGAAA GCGGGGGATCTTCGGA CCTCGCGCTATTGGATGA GCCTGCGTTGGATTA GCTA GTTGGTGGGGTAATG  L N − T C K S N G N A E S L L S G D E W R T G E * R V G I C P V V G D N S E K S E L I P H T P Y G G K R G I F G P R A I G * A C V G L A S W W G N
	16S rRNA 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510
Consensus Frame 1 Identity	GCCTACCAAGGCGATCCATÁGCTGGTCTGÁGAGGACGATCAGCCACACTGGGACTGAGACACGGCCCAGÁCTCCTACGGCAATACTGGGCAAAGGCCTGATCCAGTGTGAGAAGGCCTGAGAAGGCCTGAGAAAAGGCCTGAGGAAAAGCCTTTCAATTGGGAAAAAGCCTTGAGAGAAGGCCTGAGGATAATACCCTTGAGTCTTTAAAGCACTTTTCAATTGGGAAAAAGCCTTGAGAAAAGCCTTGAGACAATACCGTGTAAAGCACTTTCAATTGGGAAAAAGCCTTGAGGATAATACCCTTTGACGTTACCTTTAGAAGAAGCACCGGCTAACTCCGTGCCAGC  G L P R R S I A G L R I I P L G L D V T F R R S T G ** L R A S
16S rRNA - Rifp1Sym_ff00010 Frame 1	GCCTA CCAA GGCGA CGATCCATA GCTGGTCTGA GA GGA CGATCA GCCA CACTGGGA CTGAGA CA CGGCCCA GACTCCTA CGGGA GGCA TA CTGGGCAAA GCCTGATCCAGCA TA CCGCGTGTTGTAAAG GCCTTTCAATTGGGA AGAAA GCCTGA GGA GAATA CCCTTGGGTCTTGAGA CACTGGGCAAA CTCCGGTACCAGTG CCAGA TA CCGCGTGTTGTGAAAA GCCTTTCAATTGGGA AGAAA GCCTGA GGA TAA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GC  G L P R R R S I A G L R G R S A T L G L R H G P D S Y G R Q Q W G I L D N G R K P D P A I P R V * R R P A G C K A L S I G K K S L R I I P L G L D V T F R R S T G * L R A S  small subunit ribosomal RNA
16S rRNA - Rifp2Sym_fr00030 Frame 1	GCCTA CCAA GGCGA CGATCCATAGCTGGTCTGAGA GGA CGACTCGGGA CTGAGGA CA CGGCCCA GACTCCTA CGGGA GGCA GCAGTGGGGAA TA TTGGA CAA TGGGCGAAA GCCTGATCCA GCAA TA CCGCGTGTGTGAAAA GGCCTTCAATTGGGAAAAA GCCTGA GGAAAAA GCCTGA GGATAA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GC G L P R R R S I A G L R G R S A T L G L R H G P D S Y G R Q Q W G I L D N G R K P D P A I P R V * R R P A G C K A L S I G K K S L R I I P L G L D V T F R R S T G * L R A S Small subunit ribosomal RNA
16S rRNA – TevJSym_cg00050 Frame 1	GCCTA CCAA GGCGA CGAT CCATAGCT GGT CTGA GA GGA CGA CTGG GA CTGA GA CA CGGCC CA GA CT CCTA CGG GA GA GA GCA GTG GG GA A TATT GGA CAAT GG GC GA AA GCCT GA
16S rRNA – Robidart, NZ_AASF01001544 Frame 1	CTGCGGGTTGTAAAGCACTTCAATTGGGAAGA <mark>G</mark> AAGCCTGAGGATAATACCCTTGGGTCTTGACGTTACCTTTAGAAGAAGCACCGGCTAACTCCGTGCCAGC  C G L * S T F N W E E K P E D N T L G S * R Y L * K K H R L T P C Q  165 rRNA
16S rRNA - Di Meo Rif9N/18S/Tev9N, REU77478 Frame 1	GCCTA CCAA GGCGA CGATCCATAGCTGGTCTGAGA GGA CGATCA GCCA CACTGGGA CTGAGA CA CGGCCCA GACTCCTA CGGGA GGCA GTGGGGAAA GCCTGATCCA GCAATA CCGCGTGTTGTAAA GCACTTTCAATTGGGAAAA GCCTGA GGATAA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA CCGCGTGTGTGAAA GCCTTGAGAAA GCCTGA GGATAA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA CCGCGTGTGTGAAA GCCTGA GCAATA CCGCGTGTGTAAA GCACTTTCAATTGGGAAGAA GCCTGA GGATAA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA CCGCGTGTGTAAA GCACTTTCAATTGGGAAGAA GCCTGA GCAATA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA CCGCGTGTGTAAA GCACTTTCAATTGGGAAGAA GCCTGA GCAATA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA CCGCGGTTGTAAA GCACTTTCAATTGGGAAGAA GCCTGA GGATAA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA CCGCGGTTGTAAA GCACTTTCAATTGGGAAGAA GCCTGA GAAAA GCCTGA GAAAA GCCTGA GAAAA GCCTGA GCAATA TA CCCTTGGGTCTTGACGTTA CCTTTA GAA GAAGCACCGGCTAA CTCCGTGCCA GCAATA TA CCCTTGGGA GAAAA GCCTGA GCAATA TA CCCTTGGGTCTTA CCTTTA GAA GAAG CCTGA GCAATA TA CCCTTGGGTCTTA CCTTTA GAA GAAG CCTGA GCAATA TA CCCTTGGGA GAAAA GCCTGA GAAAA A GCCTGA GAAAAA A G
16S rRNA - Di Meo RifGY-V/GR, REU77480 Frame 1	GCCTA CCAA GGCGA CGATCCATAGCTGGTCTGAGA GGA CGATCA GCCA CACTGGGA CTGAGA CA CGGCCCA GACTCCTA CGGGAGGCA TATTGGA CAATGGGCG CAATACCGCGTGTGTGAAGAGGCCTGCGGGTTGTAAAGCACTTTCAATTGGGAAGAAGCCTGAGGAAAAGCCTTGAGGTCTTGACGTTACCTTTAGAAGAAGCACCGGCTAACTCCGTGCCAGC  G L P R R R S I A G L R G R S A T L G L R H G P D S Y G R Q Q W G I L D N G R K P D P A I P R V * R R P A G C K A L S I G K K S L R I I P L G L D V T F R R S T G * L R A S  165 rRNA
Consensus Frame 1	520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770  AGCCGCGGTAATACGGAGGGTGCGAGGGGGGGGGGGGG
Identity 16S rRNA - Rifp1Sym_ff00010	A GCCGCGGTAA TA CGGAGGGTGCGA GCGTTAA TCGGAA TTA CTGGGCGTAAA GCGCGCGTA GGCGGCTTGTTAA GTCA GATGTGAAA GCCCTGGGAC CTGCGAA GCGTGGAA GCGTGGAA GCGTGGAA GCGTGGAA GCGTGGAA GTGGAA TTCCGGGTGAA GCGTGGAA GTGGAA TTCCGGGTGAA GCGTGGAA GTGGAA TTCCGGGTGAA GCGTGGAA GTGGAA TTCCGGGTGAA A TCGGAA GTGGAA TTCCGGAA GA
16S rRNA – Rifp2Sym_fr00030	SRGNTEGASVNRNYWA*SARRRLVKSDVKALGSTWELHLILAG*SMVEGSGIPGVAVKCVDIRRNISGEGDFLDQY*R*GAKAWVA  small subunit ribosomal RNA  A GCCGCGTAA TACGGAGGGTGCGA GCGTTAA TCCGGAGGCGCTAAA GCGCGCGTAAA GCGCTGAAA GCCCTGGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGGAAA GCGTGGGAAA GCGTGGAAA GCGTGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGAAA GCGTGAAAA GCGTGAAAAAAAAAA
16S rRNA – TevJSym_cg00050	SRGNTEGASVNRNYWA*SARRRLVKSDVKALGSTWELHLILAG*SMVEGSGIPGVAVKCVDIRRNISGEGDFLDQY*R*GAKAWVA  small subunit ribosomal RNA  A GCCGCGGTAA TACGGAGGGTGCGA GCGTTAA TCCGGAGTGAAA GCCGCGTAAA GCGCGCGTAAA GCCGCGAAA GCCTGAGGTGCAAA GCCGTGAGATTTGA TACTGGCAAGTTTGA TACTGGCAAGTTTGA TACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAATTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTTGATACTGGCAAGTTCCTGGAAATTCCGGAGTTTCAAGTTCAAGTTGATACTGGCAAAAGCCTTGATACTGACAGTTTGATACTGGCAAAATTCCGGGTGTAAATTCCGGAGTAAATTCCGGAGTAAATTCCGGAGTAAATTCCGGAGTAAATTCCGGAGTAAATTCCGGAGTTTCAAGTTAAAGTTAATTCAAGTTGAAAGCCTTGAAATTCCGGAAATTCCGGAAATTCCGGAGTTTCAAAGTTAATTCAAGTTAAAGTTAAATTCAAGTTAAAGTTAAATTCAAGTTAAAAGTTAAATTCAAGTTAAAAGTTAAATTCAAGTTAAAAGTTAAAAGTTAAATTAAAATTAAATTAAAATTAAAATTAAAATTAAATTAAAA
Frame 1  16S rRNA - Robidart, NZ_AASF01001544	SRGNTEGAS VNRNYWA* SARRRLVKS DVKALGSTWELHLILAG* SMVEGSGIPGVAVKC VDIRRNISGEGDFLDQY*R* GAKAWVA  16S rRNA  A GCCGCGGTAA TACGGAGGGTGCGA GCGTTAA TCCGGAATTA CTGGGCGTAAA GCCGCGTTAA GCGCGAAGGCGAAGGCTAAA GCCGCGAAA GCCTGAGGTGCAAA GCCGTGGAAA GCGTGGAAA GCGTGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGGAAA GCGTGAAA GCGTAAA GCGTAAA GCGTAAAA GCGAAA GCGTAAAA GCGAAA GCGTAAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAA GCGAAAA GCGAAAA GCGAAAA GCGAAAA GCGAAAA GCGAAAA GCGAAAA GCGAAAA GCAAAAA GCGAAAAA GCGAAAAA GCGAAAAA GCGAAAAA GCGAAAAA GCGAAAAAAAA
16S rRNA - Di Meo Rif9N/18S/Tev9N, REU77478	Q P R * Y G G C E R * S E L G V K R A * A A C * V R C E S P G L N L G T A F D T G R L E Y G R G K W N S G C S G E M R R Y P E E H Q W R R R L P G P I L T L R C E S V G S 16S rRNA  A GCCGCGGTAA TACGGAGGTGCGA GCGTTAA TCGGAGTTAA TCGGAGTGAAA GCGCGGTAAA GCGCGGTTAA GCGCGAAA GCGCTGAAA GCGCGAAA GCGTGAAA GCGCGAAA GCGTGAAA TCGGAAA TCCGGAGGAAA GCGTAAA GCGTAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA TCCGGAGGAAA GCGTAAA GCGTAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA GCGTGAAA TCCGGAGGAAA GCGTAAA GCGAAA GCGTAAA GCGAAA GCGTAAA GCGAAA GCAAA GCGTAAA GCGAAA GCAAA GAAA G
16S rRNA - Di Meo RifGY-V/GR, REU77480	*16S rRNA  A GCCGCGGTAA TACGGA GCGTGAA CCGGA GCGTTAA TCGGAA TTA CTGGCGAA GCGCGTAA A GCCGCGTA GCCGCGTAA GCCGCGAA GCCTGGGAA GCCTGGAA GCCTGGGAA GCCTGGAA GCCTGGGAA GCCTGGAA GCCTGGGAA GCCTGGAA GCCTGAA GCCTGGAA GCCTGAA A GC
Frame 1	SRGNTEGASVNRNYWA*SARRRLVKSDVKALGSTWELHLILAG*SMVEGSGIPGVAVKCVDIRRNISGEGDFLDQY*R**CAKAWVA 16S rRNA 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1,000 1,010 1,020
Consensus Frame 1 Identity	AAACAGGATTAGATACCCTG-GTAGTCCACGCCGTAAACGATGTCAACTAGCCGTTGGGCTCATTATAAGGGCTTAGTGGCGCGCGC
16S rRNA - Rifp1Sym_ff00010 Frame 1	AAACA GGA TTA GATA CCCTG- GTA GTCCA CGCCGTAAA CGA TGTCAACTAG CCGTTGG GCTCATTA TAA GG GCTTA GT GG CG CA GATA GAT
16S rRNA - Rifp2Sym_fr00030 Frame 1	AAACAGGATTAGATACCCTG-GTAGTCCACGCCGTAAACGATGTCAACTAGCCGTTGGGCTCATTATAAGGGCTTAGTGGCGCAGCTAACGCGATGAGTTGACGGCGCGCAGGTTAAAACTCAAAGGAATTGACGGGGGGCCCGCACAAGCGGTGGAGCATGTGGTTTAATTCGATGCAACGCGAAGACCTTACCAGCCCTTGACATCCTCGGAACTTTCTAGAGATTGGTGCCTTCGGAACTTTCTAGAGATTGGTGCCTTCGGAACTTTCTAGAGATTGGTGCCTTCGGAACTTTCTAGAGATTGGTGCCTTCGGAACTTTCTAGAGATTGGTGCCTTCGGAACTTTCTAGAGATTGGTGCCTTCGGAACTTTCTAGAGGAATTGACGGGGGGCCCGCACAAGCGGTGAGCATGTGGTTTAATTCGATGCAACGCGAAGACCTTACCAGCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCCTTGACACCCTTCGGAACTTTCTAGAGGATTGGTGCCTTCGGAACTTTCTAGAGGATTGGTGCCTTCGGAACTTTCTAGAGGATTGGTGCCTTCGGAACTTTCTAGAGGATTGGTGCCTTCGGAACTTTCTAGAGGATTGACACCCTTGACACCCTTGACACCCCTTGACACCCTTGACACCCTTGACACCCCTTGACACCCTTGACACCCTTGACACCCTTGACACCCTTGACACCCTTGACACCTTACAAGCTTAAACTCAAAGCTCAAAGCTTAAACTCAAAGCTCAAAGCTTAAACCTCAAAGCTTAAACTCAAAGCTTAAACTCAAAGCTCAAAGCTTAAACTCAAAGCTAAGCTTAAACTCAAAGCTCAAAGCTTAAACTCAAAGCTTAAACTCAAAGCTAAAGTTGACCGCGCAGAGATTGACCGCGCAAAGTTGACCGCCAAAGCTTAAACTCAAAGCTTAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTAAAGTTGACCGCCAAAGCTTAAACTCAAAGCTAAAACTCAAAGCTAAAGTTGACACACCTTAAAACTCAAAGCTCAAAGCTTAAAACTCAAAGCTCAAAGCTTAAAACTCAAAGCTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGCTTAAAACTCAAAGATAAAACTCAAAAAACTCAAAAAACTCAAAAAAACTCAAAAAA
16S rRNA – TevJSym_cg00050 Frame 1	AAACAGGATTAGATACCCTG-GTAGTCCACGCCGTAAACGATGTCAACTAGCCGTTGGGCTCATTATAAGGGCTTAGTGGCGCAGCTAACGCGATAAGTTGACCGCCGCAGGGTAAACTCAAAGGAATTGACGGGGGGCCCGCACAAGCGGTGGAGCATGTGGTTTAATTCGATGCAACGCGAAGACCTTACCAGCCCTTGACATCCTCGGAACTTTCTAGAGATAGAT
16S rRNA – Robidart, NZ_AASF01001544 Frame 1	AAACAGGATTAGATACCCTGAGTACACGCCGTAAACGATGTCAACTAGCCGTTGGGCTCATTATAAGGGCTTAGTGGCGCAGCTAACGCGATAAGTTGACGGCGCGCAAGGTTAAAACTCAAAGGAGTTGAACGCGCAAGGTTAAAACTCAAAGGGGCCCGCACAAGCGGGGGCCCGCACAAGCGGGGGCCCGCACAAGCGGGGGG
16S rRNA - Di Meo Rif9N/18S/Tev9N, REU77478 Frame 1	AAACA GGATTA GATA CCCTG- GTA GTCCA CGCCGTAAA CGA TGTCAACTA GCCGTTGGGCTCATTA TAA GGGCTTA GTGGCGCA GCTAA CGCCGTAAGTTGA CCGCCTGGGGAGTTAAAACTCAAA GGGATTAAAACTCAAA GGGGTGGAGCA TGTGGTGGTTTAA TTCGA TGCAA CGCGAA GAA CCTTACCAGCCCTTGA CATCCTCGGAA CTTTCTA GA GATA GAT
16S rRNA - Di Meo RifGY-V/GR, REU77480 Frame 1	AAACA GGATTA GATA CCCTG- GTA GTCCA CGCCGTAAA CGATGTCAACTA GCCGTTGGGCTCATTA TAA GGGCTTA GTGGCGCA GCTAA CGCGATAAGTTGA CCGCCTGGGGAGTA CGGCCGCAA GGTTAAAACTCAAA GGGATTGA CCGCCGCA GGTTAAAACTCAAA GGGATTGA CGGGGGGCCCGCA CAA GCGGTGGAGCA TGTGGTGGTTTAA TTCGATGCAA CGCGAA GAA CCTTACCAGCCCTTGA CATCCTCGGAA CTTTCTA GA GATA GAT
Consensus Frame 1	1,030 1,040 1,050 1,060 1,070 1,080 1,090 1,100 1,110 1,120 1,130 1,140 1,150 1,180 1,190 1,200 1,210 1,220 1,230 1,240 1,250 1,250 1,260 1,270 1,280  GAGCCGAGTGA CAGGTGCTGCATGGCTGTCGTCGTCGTGAGATGTTGGGGTTAAGTCCCGTAACGAGGGAGG
Identity 16S rRNA - Rifp1Sym_ff00010	GA GC CGA GT GA CA GGT GCT GCA TG G CTG T CGT CGT CGT GA GA TG T TG GG CT A A GT CC CGTA A CGA GC CCT TA GT TG C CA A C CCT TG C CCT TA GT TG CGA GGA GGA CT CT A GG GG CT GCA A CCC GG GG A GC CAA T CT CA GA A CCC GG GG A GC CAA T CT CA GA A CCC GG GG A GC CAA T CT CA GA A CCC GG GG A GC CAA T CT CA GA A CCC GG GG A GC CAA T CT CA GA A CCC GG GG A GC CAA T CT CA GG GG A GC CT CAA GC CC GT A CA CA CC GT GA CA CC CT CAA GC CC GT A CA CC CG CG A GC CT CAA A CC CG CG A GC CAA T CT CA GG GG A CT CT CAA GC CC GT A CA CC CG CG A CC CT CAA GC CC CG CAA T CT CA GA CC CG CG A CC CT CAA GC CC CG CAA T CT CAA GC CC CG CAA T CT CAA GC CC CG CAA T CT CAA GC CC CT CAA GC CC CG CAA T CT CAA GC CC CG CAA T CT CAA GC CC CT CAA GC CC CT CAA GC CC CG CAA T CT CAA GC CC CT CAA GC
Frame 1  16S rRNA – Rifp2Sym_fr00030	E P S D R C C M A V V S S C R E M L G * V P * R A Q P L P L V A S T * W W E L * G D C R * Q T G G R W G * R Q V I M A L M G W A T H V L Q W P V Q R A A N P R G G A N L R K Small subunit ribosomal RNA  GA GCCGAGTGA CAGGTGCTGCATGGCTGCTGAGATGTTGGGTTAAGTCCCGTAACGAGGGGAGGGGAGGGGGAGGTGACGTGAACCCGCGAGGGGAACCCTTGCCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGAACCCGAACCCTTAAGGGGAACCCTTAAGGAACCCGAAACCCAACACACAC
Frame 1  16S rRNA - TevJSym_cg00050	E P S D R C C M A V V S S C R E M L G * V P * R A Q P L P L V A S T * W W E L * G D C R * Q T G G R W G * R Q V I M A L M G W A T H V L Q W P V Q R A A N P R G G A N L R K Small subunit ribosomal RNA  GA GCCGAGTGA CAGGTGCTGCATGGCTGTCGTCGTGAGATGTTGGGTTAAGTCCCGTAACGAGGGGAGGGGGAGCCTTAGTTGCCAGCAGGGGAACCCTTGCCCTTAGTTGCCAGCAGGGGAACCCTTGCCCTTAGTTGCCAGCAGGGGAACCCTTGCCCTTAGTTGCCAGCAGGGGGAACCCTTGCCCTTAGTTGCCAGCAGGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGGGAACCCTTAGTTGCCAGCAGGAGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAGGGGGAACCCTTAAGGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGGAACCCTTAAGGGAACCCAGAAACCCGAAACCCGAAACCCAGAAACCCGAAACCCAGAAACCCAGAAACCCAGAAACCCAGAAACCCAGAAACCCAGAAACCCAGAAACCAAAACCAAAAACCAAAAACCAAAAAA
Frame 1  16S rRNA - Robidart, NZ_AASF01001544	E P S D R C C M A V V S S C R E M L G * V P * R A Q P L P L V A S T * W W E L * G D C R * Q T G G R W G * R Q V I M A L M G W A T H V L Q W P V Q R A A N P R G G A N L R K 16S rRNA  GA GCCGAGTGA CAGGTGCTGCATGGCTGTCGTCGTGAGATGTAGGGGCTAGAGGGGGGAGCCCTTAGTTGCCAGCACGTAATGGTGGGAACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTGTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTCTAAGGGGACTGTAAGGGGACTGTAAGGGGAACTCTAAGGGGACTGTAAACCCGCGAGGGGGAGCCAATCTCAGAGACCCTTAGTTGCCAGCAGGGGAACTCTAAGGGGACTGTAAACCCGCGAGGGGGAGCCAATCTCAGAGACCCTTAGTTGCCAGCACGTAATGGTGGGAACTCTAAGGGGACTGTAAACCCGCGAGGGGAACTCTAAGGGGACTGTAAACCCGCGAGGGGAACTCTAAGGGGAACTCTAAGGGGAACTCTAAGGGGAACTCTAAGGGGAACTCTAAGGGGAATGTCATGGCCCCTTATGGGCCTGGGCTACACACGTGCTACAATGGCCGGTAAACCCGCGAGGGGAGGCCAATCTCAGAACCCGGAAGGAA
Frame 1  16S rRNA - Di Meo Rif9N/18S/Tev9N, REU77478	SRVTGAAWLSSARVVRCRVKSRNERNPCP**LPARNGGNSKGTGGGAAGGGGAAGGGGAAGGGAAGGGGAAGGGGAAGGGGAAGGGG
16S rRNA - Di Meo RifGY-V/GR, REU77480	SRVTGAAWLSSARVVRCWVKSRNERNPCP*LPARNGGNSKGTAGOTGGGGAGGGGAGGGGAGGGGGAGGGGGAGGGGGGGG
Frame 1	EPSDRCCMAVVSSCREMLG*VP*RAQPLPLVAST*WWEL*GDCR*QTGGRWG*RQVIMALMGWATHVLQWPVQRAANPRGGANLRK 165 rRNA  1,290 1,300 1,310 1,320 1,330 1,340 1,350 1,360 1,370 1,380 1,390 1,400 1,410 1,420 1,430 1,440 1,450 1,460 1,470 1,480 1,490 1,500 1,510 1,520 1,530 1,539
Consensus Frame 1 Identity	A CCGCTCGTAGTCC GGATCGCAGTCTGCAACTCGACTGCGTGAAGTCGCTAGTAATCGCGGGATCAGCATGCCGCGGTGAATACGTTCCCGGGCCTTGTACACCACCGCCCGTCACACCGTTGTGCAAAAGAAGTGGGTAGCCTAAAAGAAGTGGGTAGCCTAAGAGTAGCCTAGGGGATCACCTCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGAACCTGGGGCTGGATCACCTCCCTTCTACACAAGGTAGCCCTAGGGGAACCTGGGGCTGGATCACCACCTCCCTTCTACACAAGGTAGCCCTAGGGGAACCTGGGGCTGGATCACCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCACCTCCCTTCTACACAAGGTAGCCCTAGGGGATCACCACCTCCTTCTACCCTCCCT
16S rRNA - Rifp1Sym_ff00010 Frame 1	A CCGGTCGTAGTCCGGATCGCAGTCTGCAACTCGA CTGCGTGAA GTCGGAATCGCTAGTAATCGCGGATCA GCATGCCGCGGTGAA TA CGTTCCCGGGCCTTGTA CACA CCGCCCGTCA CA CCATGGGA GTGGGTTAA CCT - TCGGGA GGGCGCTCACCACTTTGTGATTCATGA CTGGGGTGAA GTCGTAA CAA GGTA GCCCTA GGGGAA CCTGGGGCTGGA TCA CCTCCTT  P V V V R I A V C N S T A * S R N R * * S R I S M P R * I R S R A L Y T P P V T P W E W V A K E V G S L T - F G R A L T T L * F M T G V K S * Q G S P R G T W G W I T S  small subunit ribosomal RNA
16S rRNA - Rifp2Sym_fr00030 Frame 1	A CCGGTCGTAGTCCGGATCGCAGTCTGCAACTCGA CTGCGTGAA GTCGGAATCGCTAGTAATCGCGGGATCA GCATGCCGCGGTGAATA CGTTCCCGGGCCTTGTA CACA CCGCCCGTCA CA CCATGGGA GTGGGTTGCAAAA GAA GTGGGTA GCTTAA CCT-TCGGGA GGGCGCTCACCACTTTGTGATTCATGA CTGGGGTGAA GTCGTAA CAA GGTA GCCCTA GGGGAA CCTGGGGCTGGA TCA CCTCCTT  P V V V R I A V C N S T A * S R N R * * S R I S M P R * I R S R A L Y T P P V T P W E W V A K E V G S L T - F G R A L T T L * F M T G V K S * Q G S P R G T W G W I T S  small subunit ribosomal RNA
16S rRNA - TevJSym_cg00050 Frame 1	A CCGGTCGTAGTCCGGATCGCAGTCGCAGTGAAGTCGCAAGTCGCAAGTCGCGGATCAGCATGCCGCGGTGAATACGTTCCCGGGCCTTGTACACCACCGCCCGTCACACAGGGAGGG
16S rRNA - Robidart, NZ_AASF01001544 Frame 1	A CCGGTCGTAGTCCGGATCGCAGTCTGCAACTCGA CTGCGTGAA GTCGGGATCAGCATGCCGGGATCAGCATGCCGGGCCTTGTA CACACCGCCCGTCA CACACGGCCGTCAAAA GAA GTGGGTAGCTTAACCT - TCGGGAGGGCGCTCACCACTTTGTGATTCATGACTGGGGTGAAGTAGCCTAAGGTAGCCCTAGGGGAACCTGGGGCTGGATCACCTCCTTTTT  N R S * S G S Q S A T R L R E V G I A S N R G S A C R G E Y V P G P C T H R P S H H G S G L Q K K W V A * P S G G R S P L C D S * L G * S R N K V A L G E P G A G S P P  165 rRNA
16S rRNA – Di Meo Rif9N/18S/Tev9N, REU77478 Frame 1	A CCGGTCGTAGTCCGGATCGCACTCGACTCGACTGCGGAATCGCTAGTAATCGCGGATCAGCATGCCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTGGGTTGCAAAAGAAGAAGTGGGTAGAGTGCGTAGGGGC-CACCCTTGGGATCAGTGGGATCAGTGGGATCAGTGGGATCAGTGGGAT
16S rRNA - Di Meo RifGY-V/GR, REU77480 Frame 1	A CCGGTCGTAGTCCGGATCGCACTCGACTCGACTGCGGAATCGCTAGTAATCGCGGATCAGCATGCCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGGGAGTGGGTTGCAAAAGAAGAAGTGGGTAGCTTAACCT-TCGGGAGGGCGCTCACCACTTTGTGATTC  PVVVRIAVCNSTA*SRNR**SRISMPR*IRSRALYTPPVTPWEWVAKEVGSLT-FGRALTTL*F  16S rRNA

Consensus	1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340  CGTAACAAGGTAGCCCTAGGGGAACCTGGGGTAGCTCACGTTGAGCAAAGTTTCGCCGGGTTGGGTAGCTCACGTTAAAAGGTTTCGCCGGGTTGGGTAGCTCACGTTAAAGCAGATACAGGTTGAGCAAATTGGGTCTGTAGCTCACGTTAGAGCGCACCCCTGATAAGGGTCGGTTGGTT
Identity ITS - Riftia 1 symbiont	TCACCTCCTTTAAAAAGTTTCGCCGGGTCGGCGGAGTACTCACATAAATTACCTATCCACAGTTAAAGCAGATACAGGCCTGTTGCTTGAAGCATCTGTACTGCACTTGAGCAAATTGGGTCTGTAGCTCAGTTAGAGCGCCACCCCTGATAAGGGTGAGGTCGG
ITS - Riftia 2 symbiont	small  TCACCTCCTTTAAAAAGTTTCGCCGGGTCGGCGGAGTACTCACATAAATTACCTATCGACGGTTGAAGCATCTGTACTGCACCTTGAGCCAAATTGGGTCTGAGGCCACCCCTGATAAGGGTGAGGTCGG  TCACCTCCTTTAAAAAAGTTTCGCCGGGTCGGCGGGGGGGG
ITS – Tevnia symbiont	TCACCTCCTTTAAAAAGTTTCGCCGGGTCGGCGGAGTACTCACATAAATTACCTATCCACAGGTTAAAGCAGGTCGTTGCTTGAAGCATCTGTACTGCACCTTGGTTAGGTCAGGTTAGAGCGCACCCCTGATAAGGGTGAGGTCGG
	tRNA-lle-GAT
ITS – Robidart NZ_AASF01001544 ITS – Di Meo Rif9N, AF076801	TGGATCACCTCCTTTAAAAAGTTTCGCCGGGTCGGCGGAGTACCACATAAATTACCTATCACAGTTAAAGCAGATACAGGCCTGTTGCTTGAAGCATTTGGCTCAGAGCAAATTGGGTCTAGAGCGCACCCCTGATAAGGGTGAGGTCGG CGTAACAAGGTAGCCCTAGGGGAACCTGGGGGAGTACCACGTTAAAAAGTTTCGCCGGGGTCGGCGGAGTACAGGCCTGTTGCTTGAAGCATCTGTACTGCACTTGAGCAAATTGGGTCTAGAGCGCACCCCTGATAAGGGTGAGGTCGG CGTAACAAGGTAGCCCTCGTTTAAAAAGTTTCGCCGGGTCGGCGGAGTACCACGTTGAAGCAGTTCGCACTTGAAGCATCTGTACTGCACTTGAGCAAATTGGGTCAGTTAGAGCGCACCCCTGATAAGGGTGAGGTCGG (tRNA-lle
ITS – Di Meo Rif13N, AF076803	CGTAACAAGGTAGCCCTAGGGGAACCTGGGGCTGGATCACCTCGTTAAAAAGGTTCGCCGGGTCGGC-GAGTACTCACATAAATTACCTATCCACAGGTTAAAGCAGATACAGGCCTGTTGCTTGAAGCATCT <mark>A</mark> TACTGCACTTGAGCAAATTGGGTCTGTAGCTCAGTTAGAGCGCACCC-TGATAGTGAGGTCGG  TRNA-Ile
ITS – Di Meo RifGY–V, AF076799	AGGGGAACCTGGGGCTGGATCACCTCCTTTAAAAAAGTTTCGCCGGGTCGGCGGAGTACTCACATAAATTACCTATCCACAGTTAAAGCAGATACAGGCCTGTTGCTTGAAGCATCTGTACTGCACTTGAGCAAATTGGGTCTAGGTCAGTTAGAGCGCACCCCTGATAAGGGTGAGGTCGG
ITS – Di Meo RifGR, AF076805	CGTAACAAGGTAGCCCTAGGGGAACCTGGGGCTGGATCACCTCGTTTAAAAAAGTTTCGCCGGGTCGGC-GAGTACTCACATAAATTACCTATCCACAGTTAAAGCAGATACAGGCCTGTTGCTTGAAGCATCTGTACTGCACATTGAGCAAATTGGGTCTGTAGCTCAGTTAGAGCGCACCCCTGATAAG-GT-AGGTCGG  (RNA-Ile
ITs - Di Meo Rif18S, AF076806	CGTAACAAGGTAGCCCTAGGGGAACCTGGGGGAACCTGGGGGAACCTGGGGGAACCTGGGGGGAACCTGGGGAACCTGGGAACTTGAGCAAATTGGGTCTGTAGCTCAGTTAGAGCGCAACTTGAAGCAGTTAAAAGGGTGAGGTCGG TRNA-Ile
ITS – Di Meo Tev9N, AF076800	GGGAA-CTGGGGCTGGATCACCTCCTTTAAAAAAGTTTCGCCGGGTCGGCGGAGTACTCACATAAATTACCTATCCACAGTTAAAGCAGATACAGGCCTGTTGCTTGAAGCATCTGTACTGCACATTAGCTCAGTTGGTTAGAGCGCACCCCTGATAAGGGTGAGGTCGG  (TRNA-Ile
ITS – Di Meo Tev13N, AF076802	CGTAACAAGGTAGCCCTA <mark>A</mark> GGGAACCTGGGGCTGGGCTGGGCTGGGCTGGGCTGGGC
ITS – Harmer Riftia symbiont phylotype 1 ITS – Harmer Riftia symbiont phylotype 2 Consensus	CGGATCACCAGTTACCCGCGGCTGAATACCTTCCCGGGCCTTGTACACCCCCCTCACAGGAGACTGGGCTAGCCTTGAAAAAGAAAG
Identity	
ITS – Riftia 1 symbiont	AGGIT CAAA TCCTCCCAGACC CACCAGATT GGAGGCCCTAGGCTCAGGCGGGGGGGGGG
ITS – Riftia 2 symbiont	AGGTT CAAA TCCTCCCAGACCCACCAGATT GGAGGTCCAGGTCAGGCCCATAGCTCAGGTGGGAGAGGCCCTGCCTTGCACGCAGGAGGTCGCCAGGTTCGACCCACGTTGCACCACGTTGCACGCAGGTCGCCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACGTTGCACCACTTTGCAATTCAGGTAGGT
ITS – Tevnia symbiont	AGGTT CAAA T C C T C C C AG AC C C A C C AG ATT G G A G G C C C T A G C T C AG C T A G C T C AG C T G G A G A G C C T T G C A A A G T T T T C C A A A G T T T C C A A A G T T T C C A A A G T T C C A A A G T T C C A A A G T T C C A A A G T T C C A A A G T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C A A A T T C C A A A G T T C C C C C C A A A T T C C A A A G T T C C C C C C C C C C C C C C C C C
ITS – Robidart NZ_AASF01001544 ITS – Di Meo Rif9N, AF076801	AGGTTCAAATCCTCCCAGACCCACAGATTGGAGTTCAGGGGGCCATAGCTCAGGTGGGAAGGCCCTGCCTTGCACGCAGGAGGTCGGCGGTTCGATCGCAAAGTTATCAAAATTAGGTTAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTTAAAAATTAGGTGAAAGTTTTTT
ITS – Di Meo Rif13N, AF076803	AGGIT CAAATCCTCC CAGAC CCACCAGATT GGAGTT CAGGGGGC CATAGCT CAGGAGGGCCCTGC CTTGCACGCAGGAGGT CGGCGGGT CGACGGGGGCCTT AGAAGTT CAGGGGGAGGCCCTGC CTTGCACGCAGGAGGT CGGCGGGT CGACGGGGGGT CGACGGGGGGT CGACGGGGGGT CGACGGGGGGGT CGACGGGGGGGT CGACGGGGGGGGGG
ITS – Di Meo RifGY–V, AF076799	AGGIT CAAATCCTCCCAGACCCAGATTGGAGTTCGAGGGGCCATAGCTCAGGTGGGAGAGGGCCTGCCT
ITS – Di Meo RifGR, AF076805	AGGTT CAAA T C C T C C C AG AC C C C A C C AG ACT T G G G G G C C T T G C AT T G C T T G C G A G G G G C C T T G C A G C T T G C G A G G T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C A G C T T G C T T G C A G C T T G C T T G C A G C T T G C T T G C A G C T T G C T T G C T T G C T T G C T T G C T T G C T T
ITs - Di Meo Rif18S, AF076806	AGGIT CAAA T C C T C C C AG GAC C C C C C G G A T T G G G G G G G C C T T G C C T G C C C G G G G
ITS – Di Meo Tev9N, AF076800	AGGTT CAAA TCCTCCCAGACC CACCAGATT GGAGTT CAGGGGG CATAGCT CAGGGGG CATAGCT CAGGAGGGG CCATAGCT CAGGAGGT CGCCAGAATT CATGAGT GGGAAGGT CTAGGT GGGAAGT CTT GCATGGGGAAGT CTT GCATGGGGAAG
ITS - Di Meo Tev13N, AF076802	AGGIT CAAATCCTCCCAGACC CACCAGATT GGAGTT CAGGGGG CATAGCT CAGGGGG CATAGCT CAGGAGGG CCATAGCT CAGGAGGT CTC CAGGAGT CTC
ITS – Harmer Riftia symbiont phylotype 1 ITS – Harmer Riftia symbiont phylotype 2	AGGTT CAAATC CTCC CAGAC C CACCAGATT GGAGTT CAGGGG C CATAGCT CAGGAGG C CTGC CTG