

MBFV-NC_001563.2 A--U----UAACACAGUGCGAGCUGUUUCUUGGCAC--GAAGA-UCU-----CGAUGUCUA 47
MBFV-NC_009942.1 A--U----UAACACAGUGCGAGCUGUUUCUUGGCAC--GAAGA-UCU-----CGAUGUCUA 47
MBFV-NC_009028.2 U--U----UAACACAGUCUGAAUAGUUUUUUAGCA--GAGGU-ACUA----CCAUGUCUA 47
MBFV-NC_040776.1 U--U----UAACACAGUCUGAAUAGUUUUUUAGCA--GAGGU-ACUA----CCAUGUCUA 47
MBFV-NC_034151.1 -----UAACACAGUGUGAAUAGUUUUUUUGAACA--GAGGUGAAAA--CCAUGUCUA 47
MBFV-NC_012534.1 CCGU----AAACACAGUUUGAACGUUUUUUGGAGA-----GAGAUUA-----UUAUGUUUA 47
MBFV-NC_015843.2 ACGU----AAACACAGUUUGAACGUUUUUUGGAUA-----GAGACAA----CUAUGUCUA 47
MBFV-NC_007580.2 ---U----AACUUGACUGCGAACAGUUUUUU--AGCAGGGAAUUACC----CAAUGUCUA 47
MBFV-NC_000943.1 -----UAACGCGGUUUGAACAGUUUUUUUGGAGCUUUUGAUUU-C----AAAUGUCUA 47
MBFV-NC_006551.1 ---U----UAACACAGUGCCCGGAGUUUUUUUGAGC--GUUGAUUU-U-----CAAUGUCUA 47
MBFV-NC_001437.1 ---U----UAGUGCAGUUUAAACAGUUUUUUAGAACGGAAGAUAA-C----C-AUGACUA 47
MBFV-NC_009029.2 UGAUUACAUAACACAGUGUGAACAAAGUUUUUUGAACAG-----CAAUGACCA 47
MBFV-NC_032088.1 UC----UAUAACUCAGUGUGAACAAAGUUUUUUUGAUCAGUGGA-----UAAUGACUA 47
MBFV-NC_009026.2 AG-----AAAAGUUUUCGAGGAAAGACGAGAAGCGAAUUCUCUG-----AAUGGCUA 47
MBFV-NC_012532.1 AACAGGUUU-----AAUUUGGAUUUGGAAACGAGAGUUUCUG-----UCAUGAAAA 47
MBFV-NC_035889.1 ACAGGUUU-----AUUUUGGAUUUGGAAACGAGAGUUUCUG-----UCAUGAAAA 47
MBFV-NC_012533.1 AACAGUUUU-----CGUGUUGAGAAAGAAACAGAUUCUUCGG-----AAUGAAAA 47
MBFV-NC_002640.1 -----UCUA-ACAGUUUGUUUGAAUAGAGAGCAG-AUCUCUGGAA----AAAUG---A 44
MBFV-NC_001474.2 -CGUAGUUCUA-ACAGUUU-UUUAAUUAGAGAGCAG-AUCUCUG-----AUGAAUA 47
MBFV-NC_001477.1 ACGUAGUUCUA-ACAGUUU-UUU-AUUAGAGAGCAG-AUCUCUG-----AUGAAUA 47
MBFV-NC_001475.2 ACGUAGUGCUG-ACAGUUU-UUU-AUUAGAGAGCAG-AUCUCUG-----AUGAAUA 47
MBFV-NC_002031.1 -----UAAUCGUUCGUUGAGCG-AUUAGCAGAGAACUGACCAGA-----ACAUGUC-- 45
MBFV-NC_008719.1 -----AUUUCUACUGAAAGG-GUAGAGAAAAGGAGUUUUGCUUC---UCAUGGCA 47
MBFV-NC_012735.1 -----UUUCUACUGAAAGGAGUAGAAGAAAGGAGAUUCAUUC---CAAUGGCAA 47
MBFV-NC_018705.3 CCGU----AAACACAGUUUGAACGUUUUUUGGAGAGAGACUA-----CUAUGUCA 47
TBFV-NC_027709.1 GUGUUGAGAAAAAGA-----CAGCUUAGGAGAAACAAGAGCUGGGG-----AUGGGCA 47
TBFV-NC_001672.1 GUGUUGAGAAAAAGA-----CAGCUUAGGAGAAACAAGAGCUGGGG-----AUGGUCA 47
TBFV-NC_003690.1 GUGUUGAGAAAAAGA-----CAGCUUAGGAGAAACAAGAGCUGGGG-----AUGGCCG 47
TBFV-NC_005062.1 GUGUUGAGAAAAAGA-----CAGCUUAGGAGAAACAAGAGCUGGGG-----AUGGCCG 47
TBFV-NC_001809.1 GUGUUGAGAAAAAGA-----CAGCUUAGGAGAAACAAGAGCUGGGG-----AUGGGCA 47
TBFV-NC_003687.1 -----AGAAAAAGA-----CAGCUUAGGAGAAACAAGAGCUGGGGAGUGGUUAUG--- 43

.....10.....20.....30.....40.....50.....6



MBFV-NC_001563.2 -----AGAAACCAGGAGGGCCCGGUAAAAACCGGGCUGUCAAAUAUGCUAAAAACGCGGUUAUG 103
MBFV-NC_009942.1 -----AGAAACCAGGAGGGCCCGGCAAGAGCCGGGCUGUCAAAUAUGCUAAAAACGCGGAAUG 103
MBFV-NC_009028.2 -----AAAAACCAGGAAGUCCGCGUCAAAAGCGGACUGUCAAAUAUGCUAAAAACGCCUGGCU 103
MBFV-NC_040776.1 -----AAAAACCAGGAGGACCCGCCGGAAGGCGGGUUGUCAAAUAUGCUGAAACGCCCAGCC 103
MBFV-NC_034151.1 -----AAAAACCAGGAGGACCCGGAAGAAGAACCGGGUCGUAAUAUGCUGAAGCGCACAUCC 103
MBFV-NC_012534.1 -ACAAAAAACACAGGAAGACCCCGGGCAACCCGGGUUGUCAAAUAUGCUAAAGCGCGGUGCA 106
MBFV-NC_015843.2 -ACAAAAAACACAGGAAGACCCCGGCUCAGGCCGGGUUGUCAAAUAUGCUAAAGCGCGGGAACG 106
MBFV-NC_007580.2 -----AAAAACCAGGAAAACCCCGGUAGAAAACCGGGUUGUCAAAUAUGCUAAAAACCGCGCGUA 103
MBFV-NC_000943.1 -----AAAAACCAGGAGGACCCGGGAAGCCCCGGGUCGUCAAAUAUGCUAAAAACCGGGCAUA 103
MBFV-NC_006551.1 -----AGAAACCAGGAGGGCCCGGAAGAAACCGGGCCAUCAAAUAUGCUGAAACCGCGGCAUA 103
MBFV-NC_001437.1 -----AAAAACCAGGAGGGCCCGGUAAAAACCGGGCUAUCAAUAUGCUGAAACCGCGGCCUA 103
MBFV-NC_009029.2 -----AAAAACCAGGAAGGCCCGGUAGAAAUCGGGCCGUCAAUAUGCUAAAGCGCGGUGCG 103
MBFV-NC_032088.1 -----AAAAACCAGGAAAAGUCCCGGCAUUCGUGGACUGUCAAAUAUGCUAAAGCGCGGAGCA 103
MBFV-NC_009026.2 -----GAAAACCAGGAAGACCCCGGAGGAAACCGGGUCGUCAAAUAUGCUAAAGCGUACGGCG 103
MBFV-NC_012532.1 -ACCCCAAAGAAGAAAU--CCGGAGGA-UCCGGAUUGUCAAAUAUGCUAAAAACCGCGGAGUA 103
MBFV-NC_035889.1 -A-CCCAAAAAAGAAAU--CCGGAGGAUUCGGAUUGUCAAAUAUGCUAAAAACCGCGGAGUA 103
MBFV-NC_012533.1 ---CCCAAAAAAGG-----GCCGCAUCGCGGCCUAUCAAUAUGCUGAAGCGCUUUGGA 97
MBFV-NC_002640.1 -A--CCAACGAAAAAAG--GUG--GUUAGACACCCUUUCAAAUAUGCUGAAACCGCGAGAGA 97
MBFV-NC_001474.2 -A--CCAACGAAAAAAG--GCG--AAAAACACGCCUUUCAAAUAUGCUGAAACCGCGAGAGA 100
MBFV-NC_001477.1 -A--CCAACGAAAAAAG--ACG--GGUCGACCGUCUUUCAAAUAUGCUGAAACCGCGCGAGA 100
MBFV-NC_001475.2 -A--CCAACGGAAGAAG--ACG--GGAAAAACCGUCUAUCAAAUAUGCUGAAACCGCGUGAGA 100
MBFV-NC_002031.1 -----UGGUCGUAAAGCUCAGGGGAAAAACCCUGGGCGUCAUAUAUGGU-ACGACGAGGA 97
MBFV-NC_008719.1 CAAGAGGAGCAAGACUUCGGGUCACGACCCGGGGCGUCAUAUAUGGUGACGGCCAAG- 106
MBFV-NC_012735.1 CAAAGGGGAUGAAUAAGUCUCGGGCUCGAUCCCGAGGCGUCAUAUAUGGUAGCGGCUAGA- 106
MBFV-NC_018705.3 -ACAAAAAACACAGGAAGACCCGGGGCAACCCGGGUUGUCAAAUAUGCUAAAGCGCGGCGCA 106
TBFV-NC_027709.1 GGAAGUCCAUCUCUGAAA---GGUAAGGGGGGCGGUUCCCCCUCGACGAGUGUCGAAAGAG 103
TBFV-NC_001672.1 AGAAGGCCAUCCUGAAA---GGUAAGGGGGGCGGUUCCCCCUCGACGAGUGUCGAAAGAG 103
TBFV-NC_003690.1 GGAAGGCCGUUCUAAAA---GGAAAGGGGGGGGGUCCCCCUCGACGAGCGUCGAAAGUG 103
TBFV-NC_005062.1 GGAAGGCCAUUCUGAAA---GGAAAGGGGGGCGGUUCCCCCUCGACGAGUGUCGAAAGAG 103
TBFV-NC_001809.1 GGAAGACCAUCCUGAAA---GGCAAGGGGGGCGGUUCCCCCUCGACGAGUGUCGAAAGAG 103
TBFV-NC_003687.1 --AUGACCACUUCUAAA---GGAAAGGGGGGCGGUUCCCCCUCAGGCGCAAGCUUAAAGUG 97

0.....70.....80.....90.....100.....110.....1



MBFV-NC_001563.2 -----NNNNNNNAGAG--AGACCCCGUGCCA-AAAACACCA-A-AAGAAAC 151
MBFV-NC_009942.1 -----NNNNNNN--GG--AGACCCCGUGCCACAAAACACCACA-ACAAAA 151
MBFV-NC_009028.2 AGCGUGU-----NNNNNNNUGUG--AGACCCUCAGCAC-CAAGCGCAA--ACAAAC 151
MBFV-NC_040776.1 AGCGUUU-----NNNNNNNNA-GG--AGACCCUUGGCACACAAGCGCAA--GACAAAC 152
MBFV-NC_034151.1 CGCGCUA-----NNNNNNN-----AGACCCUUGGCAGUGAAC-GCAA-UAAAAAC 148
MBFV-NC_012534.1 UCCC-----NNNNNNN--GG--AGACCCUUGCGAGUUAACACCACA-A-GAAAC 151
MBFV-NC_015843.2 UCCC-----NNNNNNNNA-GG--AGACCCUUGCGAGUGAACACCACA-A-GAAAC 151
MBFV-NC_007580.2 UCCCGCG-----NNNNNNN--UU--AGAGGAGACCCUUGCCGUUACGC-AAACAAC 151
MBFV-NC_000943.1 CCCCGCG-----NNNNNNN--G--ACCCACUCUCAAAGCAUC-----AAACAAC 145
MBFV-NC_006551.1 CCCCGCG-----NNNNNNN-----ACCCGCA-UCAUAGCAUCA-----AAAAAAC 144
MBFV-NC_001437.1 CCCCGCG-----NNNNNNN--U--AGAGGAGACCCGCAUUGCA-----UCA-AAC 145
MBFV-NC_009029.2 UCCCGCG-----NNNNNNNAGAGG--AGACCCUCCCAAAAGACGCAAAACACAAAAC 155
MBFV-NC_032088.1 UCCCGCG-----NNNNNNNAGAGGUUAGAGGAGACCCCAUUAACCCCAA-ACAAAAAC 156
MBFV-NC_009026.2 GCCAACG-----NNNNNNN-----CCCUUGGCAAAACAGUUAACGCACCAAAAGAAAC 152
MBFV-NC_012532.1 GCCCGUG-----NNNNNNN-----GGUAGAGGAGACCCCCGGAAACCGCAAAAC 149
MBFV-NC_035889.1 CCCCUG-----NNNNNNN-----GUUAGAGGAGACCCCGGAAAACGCAAAAC 148
MBFV-NC_012533.1 UCUAGCGCUGGCCNNNNNNN-----GAGACCCCGCGGCCCAUAACCAACAUAAAAAC 149
MBFV-NC_002640.1 AACC CGCUAUC AANNNNNNNNACUAG--AGGUUAGAGGAGACCCCCCAACA--CAAAAAAC 153
MBFV-NC_001474.2 AACC CGGUGU--NNNNNNN-CUAG--AGGUUAGAGGAGACCCCCC-CGAAACAAAAAAC 153
MBFV-NC_001477.1 AACC CGGUGU--NNNNNNN-UAG--AGGUUAGAGGAGACCCCCC-CGCAACCAACAAAC 153
MBFV-NC_001475.2 AACC CGGUGU--NNNNNNNACUAG--AGGUUAGAGGAGACCCCCCG--CAAAUAAAAAC 153
MBFV-NC_002031.1 GUUCGCUCCUUGUNNNNNNN-----GAGACCCUCCAGGGAACAAUUGAGUGGGAC 146
MBFV-NC_008719.1 -----GCCANNNNNNN-----GAGGAGACCCUCCGAGCAG-UAUAGC-GGAC 147
MBFV-NC_012735.1 -----GUGANNNNNNN-----C-CCAUCCCCUCCCGAGCACACAUAGC-GGAC 147
MBFV-NC_018705.3 UCCC-----NNNNNNNCCCCGCGGAAUCAAGCAAGGCCCAACCUG--GCAAGAC 155
TBFV-NC_027709.1 ACCGCAA-----NNNNNNNCUCUCUUCAGGAUUUUUCCUCCUCCU-----AU 145
TBFV-NC_001672.1 ACCGCAA-----NNNNNNNCUCUCUUCAGGAUUUUUCCUCCUCCU-----AU 145
TBFV-NC_003690.1 GCCCCAA-----NNNNNNNCUCUCUUCAGGAUUAUUUCCUCCUCCU-----AU 145
TBFV-NC_005062.1 ACCGCUA-----NNNNNNNCUCUCUUCAGGAAUUUCCUCCUCCU-----AU 145
TBFV-NC_001809.1 ACCGCGA-----NNNNNNN-UCUCUUCAGGGUUUUUCCUCCUCCU-----AU 144
TBFV-NC_003687.1 ACCGCAAAUAAGUNNNNNNNNCU-UCCUCGGGAUUUUUCCGCCUCCU-----AU 144

20.....130.....140.....150.....160.....170.....1



MBFV-NC_001563.2 AGCAUAUUGACACCUGGGA--UAGACUAG--GGGAUCUUCUGCU---CUGCACAACCAGC 204
MBFV-NC_009942.1 AGCAUAUUGACACCUGGGA--UAGACUAG--GAGAUCUUCUGCU---CUGCACAACCAGC 204
MBFV-NC_009028.2 AGCAUAUUGACACCCUGGGA--AAGACCGG--GAGAUCUUCUGCU---UCCAUCACCAGC 204
MBFV-NC_040776.1 AGCAUAUUGACACCUGGGA--AAGACCGG--GAGACCCUCUGCU---CUGCAACACCAGC 205
MBFV-NC_034151.1 AGCAUAUUGACACCUGGGA--UAGACUGG--GAGACCCUCUGCU--AUUUCAACACCAGC 203
MBFV-NC_012534.1 AGCAUAUUGACACCUGGGA--GAGACUAG--GAGACCCUCUGUCC--UAACAACACCAGC 205
MBFV-NC_015843.2 AGCAUAUUGACACCUGGGA--UAGACUAG--GAGACCCUCUGUCC--UAACAACACCAGC 205
MBFV-NC_007580.2 AGCAUAUUGACACCUGGGA--AGAC-AG--GAGAUCUUCUGCU--UUUCAACACCAGC 203
MBFV-NC_000943.1 AGCAUAUUGACACCUGGGA--AAGACUAG--GAGAUCUUCUGCU--UUUCAACACCAGC 202
MBFV-NC_006551.1 AGCAUAUUGACACCUGGGAUUAUAGACUAG--GAGAUCUUCUGCUCUAUCCAACAUCAAC 202
MBFV-NC_001437.1 AGCAUAUUGACACCUGGGA--UAGACUGG--GAGAUCUUCUGCUCUAUCUCAACAUAGC 202
MBFV-NC_009029.2 AGCAUAUUGACACCUGGGA--AAGACUAG--GGGAUUCUGCUC---UGGACUUCGGG 208
MBFV-NC_032088.1 AGCAUAUUGACACCUGGGA--UAGACUAG--GAGAUCUUCUGCUC---UGGACCCGAG 208
MBFV-NC_009026.2 AGCAUAUUGACACCUGGGA--UAGACCG---GAGAAUUCUGGCCUCGCAACACCUCC 205
MBFV-NC_012532.1 AGCAUAUUGACG--UGGGA--AAGACCA--GAGACUCCAUGAGUUUCCACCACGCGG 202
MBFV-NC_035889.1 AGCAUAUUGACG-CUGGGA--AAGACCA--GAGACUCCAUGAGUUUCCACCACGCGG 202
MBFV-NC_012533.1 AGCAUAUUGACACCUGGGA--AAGACCG--GAGACUCUGUUGGCUUCCCCACACCAGC 204
MBFV-NC_002640.1 AGCAUAUUGACG-CUGGGA--AAGACCA--GAGAUCUUCGU--GUCUCUGCAACAUCAU 206
MBFV-NC_001474.2 AGCAUAUUGACG-CUGGGA--AAGACCA--GAGAUCUUCGU--GUCUCCUCAGCAUCAU 206
MBFV-NC_001477.1 AGCAUAUUGACG-CUGGGA--GAGACCA--GAGAUCUUCGU--GUCUCCUCAGCAUCAU 206
MBFV-NC_001475.2 AGCAUAUUGACG-CUGGGA--GAGACCA--GAGAUCUUCGU--GUCUCCUCAGCAUCAU 206
MBFV-NC_002031.1 CAUAUUGACGCCAGGGA---AAGACCGGA-GUGGUUCUGCUUUUCCUCCAGGAGGUC 201
MBFV-NC_008719.1 CAUAUUGACGCCUGGGA---AAGACCGGA-GACACUCCUUGAUUCCACCUUUCUCCAC 202
MBFV-NC_012735.1 CAUAUUGACGCCAGGGA---AAGACCGGA-GACACUCCUUGAUUCCACCUUUCUCCGCC 202
MBFV-NC_018705.3 UGUAAACAGGGGGAAGGACUAGAGGUUAGAGGAGACCCUUGCGAGUGAACACC----- 209
TBFV-NC_027709.1 ACCAAA-UUCCCCCUCGACAGAGGGGGGGCGGUUCUUGUUCUCCUGAGCCACCAUCACC 204
TBFV-NC_001672.1 ACAAUA-UUCCCCCUGUAGAGGGGGGGCGGUUCUUGUUCUCCUGAGCCACCAUCACC 204
TBFV-NC_003690.1 ACCAAA-UUCCCCCUCGUCAGAGGGGGGGCGGUUCUUGUUCUCCUGAGCCACCAUCACC 204
TBFV-NC_005062.1 ACCAAA-UUCCCCCUCGACAGAGGGGGGGCGGUUCUUGUUCUCCUGAGCCACCAUCACC 204
TBFV-NC_001809.1 ACCAAA-UUCCCCCUCAGCAGAGGGGGGGCGGUUCUUGUUCUCCUGAGCCACCAUCACC 204
TBFV-NC_003687.1 ACUAAAUUCCCCCAGGAAACUGGGGGGGCGGUUCUUGUUCUCCUGAGCCACCAUCACC 204

80.....190.....200.....210.....220.....230.....2



MBFV-NC_001563.2 CACAC--- 209
MBFV-NC_009942.1 CACAC--- 209
MBFV-NC_009028.2 CACUA--- 209
MBFV-NC_040776.1 CACU--- 209
MBFV-NC_034151.1 CACUC--G 209
MBFV-NC_012534.1 CAUC--- 209
MBFV-NC_015843.2 CACU--- 209
MBFV-NC_007580.2 CACAA--G 209
MBFV-NC_000943.1 CACAA--G 209
MBFV-NC_006551.1 CACAA--G 209
MBFV-NC_001437.1 UACUA--G 209
MBFV-NC_009029.2 U----- 209
MBFV-NC_032088.1 U----- 209
MBFV-NC_009026.2 CACC--- 209
MBFV-NC_012532.1 CGCCA--G 209
MBFV-NC_035889.1 CGCCA--G 209
MBFV-NC_012533.1 CCCC---U 209
MBFV-NC_002640.1 CC-----A 209
MBFV-NC_001474.2 CC-----A 209
MBFV-NC_001477.1 CC-----A 209
MBFV-NC_001475.2 CC-----A 209
MBFV-NC_002031.1 GUGAGCAG 209
MBFV-NC_008719.1 CUUAA--GC 209
MBFV-NC_012735.1 CUAAA--GC 209
MBFV-NC_018705.3 ----- 209
TBFV-NC_027709.1 CAGA---C 209
TBFV-NC_001672.1 CAGA---C 209
TBFV-NC_003690.1 UAGA---C 209
TBFV-NC_005062.1 CAGA---C 209
TBFV-NC_001809.1 CAGA---C 209
TBFV-NC_003687.1 CAGG---C 209

40.....

