Figure S2. Difference of DNA sequences between TN18 and LM6 for candidate genes have been reported to play roles in aphid resistance. **A,** TraesCS1A02G319900; **B,** TraesCS5B02G329200; **C,** TraesCS1B02G397300; **D,** TraesCS2D02G460800; **E,** TraesCS4A02G015600LC; **F,** TraesCS6A02G000600; **G,** TraesCS6A02G418600LC.

E

TN18	ATGGGCGGAGGAGGTCGCAGCCGTTGCCCACACCGCGGATCTGCCGCGGGGATGCGGGAGAAGGACGCGGTTGCGTGGCCCCCGGATCCGGCGAAGCACG	100
LM6	ATGGGCGGAGGAGGTCGCAGCCGTTGCCCACACCGCGGATCTGCCGCGGGGATGCGGGAGAAGGACGCGGTTGCGTGGCCCCCGGATCCGGCGAAGCACG	100

TN18	TGCGCAAGAGGCGGCCAACGGGGCGCGGGGCACAACTCCAGATCCGTGCGGCCCGAGCAGAGCGTGAAGCTAGGAAGCGGCCATATGCTTTGGGTGGCCG	200
LM6	TGCGCAAGAGGCGGCCAACGGGGCGCGGGGCACAACTCCAGATCCGTGCGGCCCGAGCAGAGCGTGAAGCTAGGAAGCGGCCATATGCTTTGGGTGGCCG	200

TN18	CCTTCGGTGCAGCCGGCGGCAATGGCATGGTTGTAGTTTGGCGGCTAGGTTTGGGTGCCCCGGTGTCACCCCTGCAAGTGACACAGAAGTGAGCGACCAG	300
LM6	CCTTCGGTGCAGCCGGCGGCAATGGCATGGTTGTAGTTTGGCGGCTAGGTTTGGGTGCCCCGGTGTCACCCCTGCAAGTGACACAGAAGTGAGCGACCAG	300

TN18	GAACCAGAAGATGCCGGCAGTCTGGTAACATATGGATTTCTCCTCTCTTCTAGTAGATAATCCAGATTGTTTTGTCTTTCGTGAGCTTTTGTGCTGATGT	400
LM6	GAACCAGAAGATGCCGGCAGTCTGGTAACATATGGATTTCTCCTCTCTTCTAGTAGATAATCCAGATTGTTTTGTCTTTCGTGAGCTTTTGTGCTGATGT	400

TN18	GTGATCCAAAATTTGGACGCATATCAATTGTTTGACCCATGTGCTAGCTAGAAGGATCTGGTGTAGTTTGTTTAATCAAGGATTAATCAATGATATACCA	500
LM6	GTGATCCAAAATTTGGACGCATATCAATTGTTTGACCCATGTGCTAGCTAGAAGGATCTGGTGTAGTTTGTTTAATCAAGGATTAATCAATGATATACCA	500

TN18	GTTTACATGTACTTTGGAAGTTTTCATCATCTGTACTTGCATATTGGAGTGAAGGTGCTAAAGTTTAGCAATTCTACATTTTATTTCTTTAATTCTGTAA	600
LM6	GTTTACATGTACTTTGGAAGTTTTCATCATCTGTACTTGCATATTGGAGTGAAGGTGCTAAAGTTTAGCAATTCTACATTTTATTTCTTTAATTCTGTAA	600

TN18	GTTGTGTTGAAAGTTGTCAATGATTACAATTAGAATCGAAGCAATACTACTTTTACCCCCTCCATTAAAAAAATGCTACTTGTACTGACTTTGTCAAGCA	700
LM6	GTTGTGTTGAAAGTTGTCAATGATTACAATTAGAATCGAAGCAATACTACTTTTACCCCCTCCATTAAAAAAATGCTACTTGTACTGACTTTGTCAAGCA	700

TN18	TTATAGTGTATAGATAAGTGTATATCTGCAGATTGTTATGTAGATGGCTTGAAACTTCTTTCTGGGTAATTGAAAAGGACGAACAACTAAACTGCATCTC	800
LM6	TTATAGTGTATAGATAAGTGTATATCTGCAGATTGTTATGTAGATGGCTTGAAACTTCTTTCTGGGTAATTGAAAAGGACGACCAACTAAACTGTATCTC	800

TN18	ATAGATGAACACTACTATTTACTGTCTCACCCGAGCTAGTATTATTGTAGCAGGCATTGCATTGTCCAAAATGGATATGTGGAATTTGCTAGTAATCAGG	900
LM6	ATAGATGAACACTACTATTTACTGTCTCACCCGAGCTAGTATTATTGTAGCAGGCATTGCATTGTCCAAAATGGATATGTGGAATTTGCTAGCAATCAGG	900

TN18	TCTTGTACTATCTGGATAAATATGGAGTGACATTTGCGAGTTGTGGCATGGCCTGCACTAACGTTCACAAGGCTGATGTCTCTTTTAAAAAACCATGCAT	1000
LM6	TCTTGTACTATCTGGATAAATATGGAGTGACATTTGCGAGTTGTGGCATGGCCTGCACTAACGTTCACAAGGCTGATGTCTCTTTTAAAAAACCATGCAT	1000

TN18	TCAGTTGTTGTTTGCTTTGACCTGATCTGATAGCAAGTGTTTTTTATGCATCTTTAGTGAAGAAGTTTTTGAGTGGCTGTCTGTTCGGAGCTACCGGAAG	1100
LM6	TCAGTTGTTGTTTGCTTTGACCTGATCTGATAGCAAGTGTTTTTTATGCATCTTTAGTGAAGAAGTTTTTGAGTGGCTGTCTGTTCGGAGCTACCGGAAG	1100

TN18	AACAGGCTAGCTGCCAACGCACAAAGACCAAGGCGGAGAATGAAGGTAGAAGCGAGACAGAATACCCGGGGAAGGTCGACCTCAAGACTTACTTGAGCCA	1200
LM6	AACAGGCTAGCTGCCAACGCACAAAGACCAAGGCGGAGAATGAAGGTAGAAGCGAGACAGAATACCCGGGGAAGGTCGACCTCAAGACTTACTTGAGCCA	1200

TN18	CGAGAATATTTCCCTTGAGTTCGAGAGGATGTTCAGTTGCTTCATCACTTGTTCTCAGTTCTGCTCCTCTTCCAAAGCACCTAGCATTATTGATTATGGT	1300
LM6	CGAGAATATTTCCCTTGAGTTCGAGAGGATGTTCAGTTGCTTCATCACTTGTTCTCAGTTCTGCTCCTCTTCCAAAGCACCTAGCATTATTGATTATGGT	1300

TN18	TGGTTCTGATCACCCTTAATTTTTTTCATTATCACTTCCTTATAGATTTCTCATTTTTTTCCTGCAGCACACTGCCTATAAGTAGTCTGGCCCATTCAGT	1400
LM6	TGGTTCTGATCACCCTTAATTTTTTTCATTATCACTTCCTTATAGATTTCTCATTTTTTTCCTGCAGCACACTGCCTATAAGTAGTCTGGCCCATTCAGT	1400

TN18	GAGCAGCGGCAGGGGCAGGCTGGCAGAACCTCATCAGCCCCATTTGCTTTGCAACCAGGATGGACGCTGCCTCAAAAAGATCTGGTATTTTTTCAGTCCA	1500
LM6	GAGCAGCGGCAGGGGCAGGCTGGCAGAACCTCATCAGCCCCATTTGCTTTGCAACCAGGATGGACGCTGCCTCAAAAAGATCTGGTATTTTTTCAGTCCA	1500

TN18	TTTTTCCATTTTATCCTTTTATAATTTGTTTAATTTAATTTTGGCTCCCTGATTGGTCTTCTCTCTGTGCACAGTTTGCTCAAACAGGGAATCGAGGACAG	1600
LM6	TTTTTCCATTTTATCCTTTTATAATTTGTTTAATTTAATTTTGGCTCCCTGATTGGTCTTCTCTCTGTGCACAGTTTGCTCAAACAGGGAATCGAGGACAG	1600

TN18	CAAGGACCATTGAAGCCCGAGGTGTTTGGAATTGGACAGTTCAATCTCTACTTTTCTCCTCCAATGATTCAGGTGTTCCCGTTTTTCTATTGAAATTTGA	1700
LM6	CAAGGACCATTGAAGCCCGAGGTGTTTGGAATTGGACAGTTCAATCTCTACTTTTCTCCTCCAATGATTCAGGTGTTCCCGTTTTTCTATTGAAATTTGA	1700

TN18	AGTCGAATAAAATTTTGTCATATATATCTATACGAATGAAATTATGCACTATGTTGTAGTTGCTGTCTTGATGGGCACCATTTTTTAAGTTTGCTATGGG	1800
LM6	AGTCGAATAAAATTTTGTCATATATATCTATACGAATGAAATTATGCACTATGTTGTAGTTGCTGTCTTGATGGGCACCATTTTTTAAGTTTGCTATGGG	1800

TN18	CCTCAGAAAATTCAGGACCGGCCCTGTATATATGTAGTGTTATTTTCCTTTGTTGTTTGTAGATGTAAGTTACCAAATATAGGTTAATATCTAGCCTGTA	1900
LM6	CCTCAGAAAATTCAGGACCGGCCCTGTATATATGTAGTGTTATTTTCCTTTGTTGTTTGTAGATGTAAGTTACCAAATATAGGTTAATATCTAGCCTGTA	1900

TN18	GTAAATGTGAAGTTAGGAATGAGTTTTTCCTTATGCATTTTCTAGTTTGTGAAGCAGCTTTTGGTAACCTGGTTCAGTTAGTCTGTTGATGTTCAACTTT	2000
LM6	GTAAATGTGAAGTTAGGAATGAGTTTTTCCTTATGCATTTTCTAGTTTGTGAAGCAGCTTTTGGTAACCTGGTTCAGTTAGTCTGTTGATGTTCAACTTT	2000

TN18	TATACAGTTCTTCCATTATATCAATTAAATAGCACGCTGCCTCTGTAATAGTATTAAGTACTCTATTCCTAGCCTTACTTATAGAACTTTGTGTAACTA	2100
LM6	TATACAGTTTCTTCCATTATATCAATTAAATAGCACGCTGCCTCTGTAATAGTATTAAGTACTCTATTCCTAGCCTTACTTATAGAACTTTGTGTAACTA	2100

TN18	TAGGTATTTTTTGTTTTCCTCTAAAATAGATTTATATTTCAAGGAAGCAGATTCATAAGTAAAAATCATAGTGATTACAGCAGAACATGTTCTTGCAAAACA	2200
LM6	TAGGTATTTTTTGTTTTCCTCTAAAATAGATTTATATTTCAAGGAAGCAGATTCATAAGTAAAAATCATAGTATTACAGCAGAACATGTTCTTGCAAAACA	2200

TN18	TCAACATGAAAGAGGTTTGCTGATGGTTCTAGGTCCGATGCTCTTAG	2247
LM6	TCAACATGAAAGAGGTTTGCTGATGGTTCTAGGTCCGATGCTCTTAG	2247

Figure S2. Continued

F

TN18	TGGACTCTCTCCTCAAAAATTGAGTCTTTGCAAGTCCAGCCGGCGGATCCAAGTTCCACTCCCCACTTCCCCCAACGCTCCCACGCTGCTCGCCGGCCGG	100
LM6	TGGACTCTCTCCTCAAAAATTGAGTCTTTGCAAGTCCAGCCGGCGGATCCAAGTTCCACTCCCCACTTCCCCCAACGCTCCCACGCTGCTCGCCGGCCGG	100
TN18	CCGGCCATGGCGGCGATGCCGACGCCCCGATCCCTCCTGCTGCTCCTCCTCCTCGCCACCCCCTTCCTCCTGCTCCCCCTCGCCGCCGCCGCCGCCTCAG	200
LM6	CCGGCCATGGCGGCGATGCCGACGCCCCGATCCCTCCTGCTGCTCCTCCTCCTCGCCACCCCCTTCCTCCTGCTCCCCCTCGCCGCCGCCGCCGCCTCAG	200
TN18	TCCCCACCTCCAACCCGGACATCGACCTCGAATACCTCATCAAGAACGCCGGCCTCGACGACGCCACCCCCAACGACCCCGAGGACGGCGCTCCGGACTT	300
LM6	TCCCCACCTCCAACCCGGACATCGACCTCGAATACCTCATCAAGAACGCCGGCCTCGACGACGCCACCCCCAACGACCCCGAGGACGGCGCTCCGGACTT	300
TN18	CCCCGACCTCGACGCCGACTACGAAGACGAGGACCTCTTCGGCGACGACGACGGGCCGGAGGAGGACTCCTCCCACCCCCTCGGCGGCCGACGAGGCCCAC	400
LM6	CCCCGACCTCGACGCCGACTACGAAGACGAGGACCTCTTCGGCGACGACGACGGGCCGGAGGAGGACTCCTCCCACCCCCTCGGCGGCCGACGAGGCCCAC	400
TN18	GTGCTCCTCCTCACCGCCGCCAACTTCACCGCCGTCCTCGCGGCCCGCCGCCACGTGATGGTCGAGTTCTACGCGCCCTGGTGCGGCCACTGCCGCGCGC	500
LM6	GTGCTCCTCCTCACCGCCGCCAACTTCACCGCCGTCCTCGCGGCCCGCCGCCACGTGATGGTCGAGTTCTACGCGCCCTGGTGCGGCCACTGCCGCGCGC	500
TN18	TGGCCCCCCACTACGCCGCCGCCGCCGCCGCCCTCGCCGAGCAGGGCGTCGACGTGGCGCTGGCCAAGGTGGACGCTACCGAGGAGCACGACCTGGCGCA	600
LM6	TGGCCCCCCACTACGCCGCCGCCGCCGCCGCCCTCGCCGAGCAGGGCGTCGACGTGGCGCTGGCCAAGGTGGACGCTACCGAGGAGCACGACCTGGCGCA	600
TN18	GGCGCACGACGTGCAGGGCTACCCCACCCTCCTCTTCTTCATCGACGGCGTGCCCAGGGACTACTCCGGCGAGAGGACCAAGTGAGCAATTTCTGCAGAT	700
LM6	GGCGCACGACGTGCAGGGCTACCCCACCCTCCTCTTCTTCATCGACGGCGTGCCCAGGGACTACTCCGGCGAGAGGACCAAGTGAGCAATTTCTGCAGAT	700
TN18	CCCCAATTCCCTCCCTGCTCCGGCTCCGCAGCTGCTGCTAAGAATTTTTGCTTTGCTGCAGGGACGCCATTGTCGCTTGGATCAGCAAGAAGCTGGGCCC	800
LM6	CCCCAATTCCCTCCCTGCTCCGGCTCCGCAGCTGCTGCTAAGAATTTTTGCTTTGCTGCAGGGACGCCATTGTCGCTTGGATCAGCAAGAAGCTGGGCCC	800
TN18	TGCGGTGCAGAACCTCACCGCCGTCGACGACGCCGAGAAGGTCGTCACCGGCGACGACGTGGCCGTGCTCGCCTTCCTCGACCACCTCTCGGTACGCAAT	900
LM6	TGCGGTGCAGAACCTCACCGCCGTCGACGACGCCGAGAAGGTCGTCACCGGCGACGACGTGGCCGTGCTCGCCTTCCTCGACCACCTCTCGGTACGCAAT	900
TN18	GCGCCTTCTCCAGTGGCAGCAAAGTCAACCAAACCCAAAATTTCTTCAATTCCAAACCATGTTACCCAGATTGACCCAAGAATACAGTTGTTGAATCACA	1000
LM6	GCGCCTTCTCCAGTGGCAGCAAAGTCAACCAAACCCAAAATTTCTTCAATTCCAAACCATGTTACCCAGATTGACCCAAGAATACAGTTGTTGAATCACA	1000
TN18	GCCAAACAGCTCATGTGGCCATCCATGTTACCCCAAATTAGTTCACCACAAATACAATGCACCTGTTCTTCTCAGTTCCCTGAATATTCTGATGACTCAC	1100
LM6	GCCAAACAGCTCATGTGGCCATCCATGTTACCCCAAATTAGTTCACCACAAATACAATGCACCTGTTCTTCTCAGTTCCCTGAATATTCTGATGACTCAC	1100
TN18	TGGATGAAATGTCAACCTGCATGTTCTGTTACCATGTGCTCAGAACAAATCTGAGTTCAACTCGTATGTTTAGCTATCGGTACGCACTCATGTGGCCATG	1200
LM6	TGGATGAAATGTCAACCTGCATGTTCTGTTACCATGTGCTCAGAACAAATCTGAGTTCAACTCGTATGTTTAGCTATCGGTACGCACTCATGTGGCCATG	1200
TN18	TTTGTTACCCCAAATTTAGTTGACCACAAATACAATGCACCTGTATTTCTGAATGCCCTTGTTCTTTTGCTTGCTCACTACTATGTACTAGTAGTAGATA	1300
LM6	TTTGTTACCCCAAATTTAGTTGACCACAAATACAATGCACCTGTATTTCTGAATGCCCTTGTTCTTTTGCTTGCTCACTACTATGTACTAGTAGTAGATA	1300
TN18	AAATGTCAACCTACATGTTCTGTTACCATGTGCTGAGAACGGCTCCCGGATGCGCTCATATGTTTAGCTATCGGACACTTGCATATAACATTGTGATAAA	1400
LM6	AAATGTCAACCTACATGTTCTGTTACCATGTGCTGAGAACGGCTCCCGGATGCGCTCATATGTTTAGCTATCGGACACTTGCATATAACATTGTGATAAA	1400
TN18	ATCCTTAATTACTCTATCATTGAATGTTTTAGGGTGCTCATAGTGATGAGCTTGCTGCTGCTTCATGATCCAAAATTACATTTCGTCTGTTCCATGATTC	1500
LM6	ATCCTTAATTACTCTATCATTGAATGTTTTAGGGTGCTCATAGTGATGAGCTTGCTGCTGCTTCATGATCCAAAATTACATTTCGTCTGTTCCATGATTC	1500
TN18	CTTTGCTCACTACTAGATAAAATGTCAACCTGCATGATCTCGTTACCATGTACTGAAAACAAATCCGAGATGCGCTTGTATTTTTGGCTATTCTAATTCTG	1600
LM6	CTTTGCTCACTACTAGATAAAATGTCAACCTGCATGATCTCGTTACCATGTACTGAAAACAAATCCGAGATGCGCTTGTATTTTTGGCTATTCTAATTCTG	1600
TN18	CGCTGCATATATATATACACTATGGTGATAAATCATTAAATTACTCTTGTCATCAAATTATATAGGGTGCTCACAGTGATGAGCTTGCTGCTGCTTCAAG	1700
LM6	CGCTGCATATATATATACACTATGGTGATAAATCATTAAATTACTCTTGTCATCAAATTATATAGGGTGCTCACAGTGATGAGCTTGCTGCTGCTTCAAG	1700
TN18	GCTGGAAGATACCATCAGCTTTTATCAGACCACCAGCCCCGATGTAGCCAAGCTTTTCCACATTGACCCGGAAGCAAAGCGCCCGTCAGTAGTCCTGCTC	1800
LM6	GCTGGAAGATACCATCAGCTTTTATCAGACCACCAGCCCCGATGTAGCCAAGCTTTTCCACATTGACCCGGAAGCAAAGCGCCCGTCAGTAGTCCTGCTC	1800
TN18	AAGAAAGAGGAGGAGAAGCTGACCGTATTTGGTATCTTCACCTCCGAGTTGCTTTGGCTTTCAGCGCCAGCCTTTCCTTTCCATTTCTTTACACGTTTTG	1900
LM6	AAGAAAGAGGAGGAGAAGCTGACCGTATTTGGTATCTTCACCTCCGAGTTGCTTTGGCTTTCAGCGCCAGCCTTTCCTTTCCATTTCTTTACACGTTTTG	1900
TN18	GTTTGACCGTTAAATTGGATAATAATGTACCGTGTGCCATGCAGATGGCGAGTTCAGAGCGTCTGCGATTGCCGAGTTTGTGTCGGCCAACAAAATCCCA	2000
LM6	GTTTGACCGTTAAATTGGATAATAATGTACCGTGTGCCATGCAGATGGCGAGTTCAGAGCGTCTGCGATTGCCGAGTTTGTGTCGGCCAACAAAATCCCA	2000
TN18	TTGATCACCACCCTCACACAGGAGACCGCCCCTGCGATTTTCGATAATCCAATCAAGAAGCAAGTATGCCATGCTGTCTGCCATGGGGTTTTATTTTCAT	2100
LM6	TTGATCACCACCCTCACACAGGAGACCGCCCCTGCGATTTTCGATAATCCAATCAAGAAGCAAGTATGCCATGCTGTCTGCCATGGGGTTTTATTTTCAT	2100
TN18	CATACTGTCGACCCATGTATTACTCCTTCGCTGACCTGCTGTCTTCTAATTTTGAAATTAGATTCTGCTATTTGCTGTTGCGAAGGAGTCCTCAAAATTT	2200
LM6	CATACTGTCGACCCATGTATTACTCCTTCGCTGACCTGCTGTCTTCTAATTTTGAAATTAGATTCTGCTATTCGCTGTTGCGAAGGAGTCCTCAAAATTT	2200

Figure S2.Continued

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TN18  CTGCCCATCATCCAAGGAAACAGCAAAATCATTCAAGGGGAAGGTATTTTTTTCCTGTTGATCGGACCAGTGTTTCATGAACTTTTTCCTCTGTCATGTTC  2300
LM6   CTGCCCATCATTAAGGAAACAGCAAAATCATTCAAGGGGAAGGTATTTTTTTCCTGTTGATCGGACCAGTGTTTCATGAACTTTTTCCTCTGTCATGTTC  2300

TN18  CACGTTTTATACTCAAATCCAAGCCATCACTTATTTCCTTTCTAATAACTTGTGTGTTTGCTGAGGTGGAGTCTCACTAAGCACTGATGTGGCCTGTGTC  2400
LM6   CACGTTTTATACTCAAATCCAAGCCATCACTTATTTCCTTTCTAATAACTTGTGTGTTTGCTGAGGTGGAGTCTCACTAAGCACTGATGTGGCCTGTGTC  2400

TN18  TCAAATGCAGCTTTTATTTGTCTTTGTGGAGCGTGACAATGAGGAAGTTGGTGAACCTGTTGCCAATTACTTTGGAATTACTGGACAAGAGACCACGGTA  2500
LM6   TCAAATGCAGCTTTTATTTGTCTTTGTGGAGCGTGACAATGAGGAAGTTGGTGAACCTGTTGCCAATTACTTTGGAATTACTGGACAAGAGACCACGGTA  2500

TN18  ATGGCTCTTAATTTTGTTGCCATGTTTATCTATCTGTTGATTTATTGTACAGAAGAACTATAGAATGCAATAATTTGACTTTGATTTTAATTTGTCTGCT  2600
LM6   ATGGCTCTTAATTTTGTTGCCATGTTTATCTATCTGTTGATTTATTGTACAGAAGAACTATAGAATGCAATAATTTGACTTTGATTTTAATTTGTCTGCT  2600

TN18  CTTTCTGTTTTGTACATCCTGATTTGATTACTTTGCAGGTTCTTGCTTACACTGGGAATGAAGACGCTAAGAAGTTTTTCTTCAGTGGTGAAATATCACT  2700
LM6   CTTTCTGTTTTGTACATCCTGATTTGATTACTTTGCAGGTTCTTGCTTACACTGGGAATGAAGACGCTAAGAAGTTTTTCTTCAGTGGTGAAATATCACT  2700

TN18  GGACACCATGAAGGTAATTGCTTAAAATATTTTTTGCAAATTCAGTACTCCCTCCGTCTGGAAATACTTGTCCTAGAAATGGTTGTATCTAGACTTATTT  2800
LM6   GGACACCATGAAGGTAATTGCTTAAAATATTTTTTGCAAATTCAGTACTCCCTCCGTCTGGAAATACTTGTCCTAGAAATGGTTGTATCTAGACTTATTT  2800

TN18  TAGTTATAGATACATCCATTTTATCTGTTTCTAGGACAAGTATTTTCGGACGGAGGGAGTACCAGATTGGAAGTAAAATCATAAGAATGTGGTCAACAGT  2900
LM6   TAGTTATAGATACATCCATTTTATCTGTTTCTAGGACAAGTATTTTCGGACGGAGGGAGTACCAGATTGGAAGTAAAATCATAAGAATGTGGTCAACAGT  2900

TN18  TGCAAGAGAATATAGTATGTTAGCAATATATAAGCTGACGAACGTGTTTTTGCTTTTCGTTATTTGATGATTTATGCTGTTCTTTTTTATACCGCGGTAT  3000
LM6   TGCAAGAGAATATAGTATGTTAGCAATATATAAGCTGACGAACGTGTTTTTGCTTTTCGTTATTTGATGATTTATGCTGTTCTTTTTTATACCGCGGTAT  3000

TN18  ATTTCTGCTTATATCGTGCTATATGTTGCTTCAGAAACTTTCATGTCCATGTATATTTTCTCATCTTTCGCCAAACTAGCACTTGTCTCATCATTGCCGA  3100
LM6   ATTTCTGCTTATATCGTGCTATATGTTGCTTCAGAAACTTTCATGTCCATGTATATTTTCTCATCTTTCGCCAAACTAGCACTTGTCTCATCATTGCCGA  3100

TN18  TTCATCATTGCTGAATGCTGATGTTGAGGCTCTGCTAATGTTATTGGGTAGGATGGTATCAAGTACCATTGTTCAAGAAAGTACAGTGTTCCTTATAAAA  3200
LM6   TTCATCATTGCTGAATGCTGATGTTGAGGCTCTGCTAATGTTATTGGGTAGGATGGTATCAAGTACCATTGTTCAAGAAAGTACAGTGTTCCTTATAAAA  3200

TN18  ATCTTTCTACTTCTTGTTAATACCCAGGAATTTGCTCAAGATTTCCTGGAGGACAAGCTCACACCATCCTACAAGTCTGACCCAGTACCTGAATCTGTGA  3300
LM6   ATCTTTCTACTTCTTGTTAATACCCAGGAATTTGCTCAAGATTTCCTGGAGGACAAGCTCACACCATCCTACAAGTCTGACCCAGTACCTGAATCTGTGA  3300

TN18  GTGGGAGAAGAATTATCTGATATCTCTTTTCCCTGTCATTATTTACACGACAATGAGGCATTCTTTGTGTTCCCGTGCAGAATGATGAGGATGTCAAAGTT  3400
LM6   GTGGGAGAAGAATTATCTGATATCTCTTTTCCCTGTCATTATTTACACGACAATGAGGCATTCTTTGTGTTCCCGTGCAGAATGATGAGGATGTCAAAGTT  3400

TN18  GTTGTTGGCAAGAGTCTAGATCAAATAGTTCTGGATGAATCAAAAGATGTCCTTTTGGAGGTATGTTCAGTTCTTGCCAGGTAGTATTTGAGAAGATAAA  3500
LM6   GTTGTTGGCAAGAGTCTAGATCAAATAGTTCTGGATGAATCAAAAGATGTCCTTTTGGAGGTATGTTCAGTTCTTGCCAGGTAGTATTTGAGAAGATAAA  3500

TN18  AAATGTGTGTTGTCCATAACGCCGTGCCATTTTGGACGCAGGTATATGCACCATGGTGTGGGCATTGTCAGTCACTGGAGCCTATCTACAACAAGCTGGC  3600
LM6   AAATGTGTGTTGTCCATAACGCCGTGCCATTTTGGACGCAGGTATATGCACCATGGTGTGGGCATTGTCAGTCACTGGAGCCTATCTACAACAAGCTGGC  3600

TN18  CAAGTATCTCCGTGGCATCGACTCCCTTGTAATAGCCAAAATGGACGGCACAAACAATGAGCATCCTCGTGCCAAGGTCTGTGTCGCTATCTTTTGACTT  3700
LM6   CAAGTATCTCCGTGGCATCGACTCCCTTGTAATAGCCAAAATGGACGGCACAAACAATGAGCATCCTCGTGCCAAGGTCTGTGTCGCTATCTTTTGACTT  3700

TN18  CTTCAAACTGGATATTACTTGCTAGACTAGTCTGAGTGCCGGGCCATCAACAGTCATAGAACCTCTACATACATTTTATATGAAACAATACTAGTTATAA  3800
LM6   CTTCAAACTGGATATTACTTGCTAGACTAGTCTGAGTGCCGGGCCATCAACAGTCATAGAACCTCTACATACATTTTATATGAAACAATACTAGTTATAA  3800

TN18  AACGTGTAGAAGTTATTTCAACACTTTCCTCACTTGAATGTGCAGTTGTACTTGTTTATGGTGCACAGAAAGTATAGGTCCATTATCTGTCTGCTGCCAT  3900
LM6   AACGTGTAGAAGTTATTTCAACACTTTCCTCACTTGAATGTGCAGTTGTACTTGTTTATGGTGCACAGAAAGTATAGGTCCATTATCTGTCTGCTGCCAT  3900

TN18  CTTACTCCCTCCGTCCCAAAATAAGTGTCGCTGACTTAGCACAACTTTGGTGTCAGCGACACTTATTTTGCGACGGAGGGAGTATCAGTATATGATAAAT  4000
LM6   CTTACTCCCTCCGTCCCAAAATAAGTGTCGCTGACTTAGCACAACTTTGGTGTCAGCGACACTTATTTTGCGACGGAGGGAGTATCAGTATATGATAAAT  4000

TN18  ATATTTATTCTGCACCTATTTATCCATACGCTACAGTGTCATGGTACAGTTTGTCTAACGGGCTAAAGAGGTCGTATGGCTATTGTCAGATTTGAATCAC  4100
LM6   ATATTTATTCTGCACCTATTTATCCATACGCTACAGTGTCATGGTACAGTTTGTCTAACGGGCTAAAGAGGTCGTATGGCTATTGTCAGATTTGAATCAC  4100

TN18  ATGCTGTTAGGAGTTAGAGACAGGTTAATTTGGGAAATAGGTCGTATTTGGCAAGACAGATTTGGCTAGGAAGATAGAGACAAGAGCTCGAGTCTTATGG  4200
LM6   ATGCTGTTAGGAGTTAGAGACAGGTTAATTTGGGAAATAGGTCGTATTTGGCAAGACAGATTTGGCTAGGAAGATAGAGACAAGAGCTCGAGTCTTATGG  4200

TN18  GACAAGTTGAGTTGAGCCTCAGAAACGAACACTGTCGCCAGGTTTGTTGAAGGATGGCGCCATGTCCCCCGGTTATCTCGCTATAGTTGGAGGCCCATAA  4300
LM6   GACAAGTTGAGTTGAGCCTCAGAAACGAACACTGTCGCCAGGTTTGTTGAAGGATGGCGCCATGTCCCCCGGTTATCTCGCTATAGTTGGAGGCCCATAA  4300
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Figure S2.Continued

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TN18  CATCTTGAAATAGTGCAACAGTATTTTTGATGCATATATAGTATTAAATGGCGCATGGGGAAGCTCGCGCTCTTCTATTTTTGGTGTGGCACTATGATTA  4400
LM6   CATCTTGAAATAGTGCAACAGTATTTTTGATGCATATATAGTATTAAATGGCGCATGGGGAAGCTCGCGCTCTTCTATTTTTGGTGTGGCACTATGATTA  4400

TN18  TGACTGTTACATTTTGAAGCTGCCTTTCATTTAGCTCTGTTTTCCTTTTAATTATCTTTCCTGACTTGACACTTTGCTTCCTGTTACAGCCTGATGGATT  4500
LM6   TGACTGTTACATTTTGAAGCTGCCTTTCATTTAGCTCTGTTTTCCTTTTAATTATCTTTCCTGACTTGACACTTTGCTTCCTGTTACAGCCTGATGGATT  4500

TN18  CCCCACAATACTCTTCTATCCAGCTGGGAAGAAAAGCTTTGAGCCTGTAAGTGCTTACATATGTGATGTTTCACTTCTTGCTTTGCAACACATCTCTCTT  4600
LM6   CCCCACAATACTCTTCTATCCAGCTGGGAAGAAAAGCTTTGAGCCTGTAAGTGCTTACATATGTGATGTTTCACTTCTTGCTTTGCAACACATCTCTCTT  4600

TN18  ACTACGATTTTGCGATTTGTCTTTCAGTTGGTAGCAATCGCGTTAACCTCGCCCCTCTCCTTAATAGGGCTTCTCAGCACAGCTATCGTTATGCTTTGCT  4700
LM6   ACTACGATTTTGCGATTTGTCTTTCAGTTGGTAGCAATCGCGTTAACCTCGCCCCTCTCCTTAATAGGGCTTCTCAGCACAGCTATCGTTATGCTTTGCT  4700

TN18  AGAGCTGTCTCTAGACTCCTTAAACTCAGCTAAAACATCCATGTGATTTAGCTGCTGATTTGTGCATGCTTATATCCCTGCAAATTTTGTGTATATGCCT  4800
LM6   AGAGCTGTCTCTAGACTCCTTAAACTCAGCTAAAACATCCATGTGATTTAGCTGCTGATTTGTGCATGCTTATATCCCTGCAAATTTTGTGTATATGCCT  4800

TN18  TTGTAGGTGCTTTACGATTGGTCATGCCCTGTGATTTTGGGTAATGGTGGTAGATTCAGTGGACAGCTAGCTAAACTCATGGGTGGAGCTTGAATGGTGC  4900
LM6   TTGTAGGTGCTTTACGATTGGTCATGCCCTGTGATTTTGGGTAATGGTGGTAGATTCAGTGGACAGCTAGCTAAACTCATGGGTGGAGCTTGAATGGTGC  4900

TN18  TATGGGATTTTAGTCAACTGGTAACCTGATATACTAACTCAATTTGCTGGCTGAACTCTTGTAGATAACTTTTGAGGGGGACCGGACGGTGGTGGAGATG  5000
LM6   TATGGGATTTTAGTCAACTGGTAACCTGATATACTAACTCAATTTGCTGGCTGAACTCTTGTAGATAACTTTTGAGGGGGACCGGACGGTGGTGGAGATG  5000

TN18  TACAAGTTCCTCAAGAAGCATGCCGCCATCCCATTCAAGCTGAAGCGCCCGGACTCGTCAGCGGCACAGACCGATGACTCAAGCTCGACGGCCGAGGGCG  5100
LM6   TACAAGTTCCTCAAGAAGCATGCCGCCATCCCATTCAAGCTGAAGCGCCCGGACTCGTCAGCGGCACAGACCGATGACTCAAGCTCGACGGCCGAGGGCG  5100

TN18  AGAAGAGCTCCGGTTCGAACCCGAAGGACGAGTTGTAGGGGGATTACTTACGCCATTGACAACAAGTACGCGGTGCTGCTGTCAAAAGCAGGAGGTGGAG  5200
LM6   AGAAGAGCTCCGGTTCGAACCCGAAGGACGAGTTGTAGGGGGATTACTTACGCCATTGACAACAAGTACGCGGTGCTGCTGTCAAAAGCAGGAGGTGGAG  5200

TN18  AACAAATAGCTAGGTATCAACTCGGGCCGCTGGAAGTGTATGTTGTGAATACGAATATTAGAATAGAATCCATTAGAAGCAAGAAGTCCTTTGCTTACAT  5300
LM6   AACAAATAGCTAGGTATCAACTCGGGCCGCTGGAAGTGTATGTTGTGAATACGAATATTAGAATAGAATCCATTAGAAGCAAGAAGTCCTTTGCTTACAT  5300

TN18  CTTGTTCCGTATCTTCAAACTAGATATATTCATACTCAAAATCTGAGAGAACCAAGGGTAGCCCACAGGTAGCTGGCTACATACATACAGTAAGAAAGTA  5400
LM6   CTTGTTCCGTATCTTCAAACTAGATATATTCATACTCAAAATCTGAGAGAACCAAGGGTAGCCCACAGGTAGCTGGCTACATACATACAGTAAGAAAGTA  5400

TN18  CGCCCCCCTGTAAACGTCTTGTAAAAGTTTACAGAGGGGAGACGTGGAGTTTCTACACCCAGGAGCACAAATGCTCCTGGTGTGAACAGT  5489
LM6   CGCCCCCCTGTAAACGTCTTGTAAAAGTTTACAGAGGGGAGACGTGGAGTTTCTACACCCAGGAGCACAAATGCTCCTGGTGTGAACAGT  5489
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TN18  ATGGCTGCTGAACAGGATGAAGAGGAGCACTGGAGGAGGACCATGGCAGCGGTGAGACCCAACCCGTCGTGGCGCCTAGTGAGCAGGCGCACGGGCACAC  100
LM6   ATGGCTGCTGAACAGGATGAAGAGGAGCACTGGAGGAGGACCATGGCAGCGGTGAGACCCAACCCGTCGCGGCGCCTAGTGAGCAGGCGCACGGGCACAC  100

TN18  CAGTAAAGCACAGCACAGCGGCGGCCGTGTCCTCCATCTCGATGCTTCAGCCGGGCGTCACCATGCAGTCACACAACGACCTGCACTCCATGATAACCTC  200
LM6   CAGTAAAGCACATCACAGCGGCGGCCGTGTCCTCCATCTCGATGCTTCAGCCGGGCGTCACCATGCAGTCACACAACGACCTGCACTCCATGATAACCTC  200

TN18  TCGATTCCGCCGCCCCCGAATCTCACGGCGTCGAGGTGGCCATGGGAGGGCTCGCCGGAGTGGTTTAGGAGAGGATCAGGGGGTTGTGGAGATCAGGGTG  300
LM6   TCGATTCCGCCGCCCCCGAATCTCACGGCGTCGAGGTGGCCATGGGAGGGCTCGCCGGAGTGGTTTAGGAGAGGATCAGGGGGTTGTGGAGATCAGGGTG  300

TN18  GAGGTGGTTTGGAGAGGTTCGGGGGTGAGGGCGGGTCGGATAGGATGGAGACCGTGAAAGGAAACCAAAAACATAGGTGATTTCCTCCCTTTTTTCCAT  400
LM6   GAGGTGGTTTGGAGAGGTTCGGGGGTGAGGGCGGGTCGGATAGGATGGAGACCGTGAAAGGAAACCAAAAACATAGGTGATTTCCTCCCTTTTTTCCAT  400

TN18  GCGGAAGAGGAGGTGGAGTCAAACGTTTTATTTGGAGGAAAATCGGTGGGGGAGGTCGATCGATGCGAGGGTTGCGTGCGAACGAACGAACGACGTACGG  500
LM6   GCGGAAGAGGAGGTGGAGTCAAACGTTTTATTTGGAGGAAAATCGGTGGGGGAGGTCGATCGATGCGAGGGTTGCGTGCGAACGAACGAACGACGTACGG  500

TN18  ACTCCTTCATTAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN  600
LM6   ACTCCTTCATTAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN  600

TN18  NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNACGGCGTCGAGGTGGCCATGGGAGGGCTCGCCGGAGTGGTTTAGGAGAGGAT  700
LM6   NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNACGGCGTCGAGGTGGCCATGGGAGGGCTCGCCGGAGTGGTTTAGGAGAGGAT  700

TN18  CAGGGGGTTGTGGAGATCAGGGTGGAGGTGGTTTGGAGAGGTTCGGGGGTGAGGGCGGGTCTGGATAGGATGGAGACCGTGAAAGAAAACCAAAAACATA  800
LM6   CAGGGGGTTGTGGAGATCAGGGTGGAGGTGGTTTGGAGAGGTTCGGGGGTGAGGGCGGGTCTGGATAGGATGGAGACCGTGAAAGAAAACCAAAAACATA  800

TN18  GGTGA  805
LM6   GGTGA  805
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Figure S2.Continued