

Figure S1: Codon optimized and wild-type sequences of TARV sigma C and sigma B genes

Codon optimized sequence of SKM121-S1 segment-sigma C

ATGGCCGCTTTAACACCTAGCCAGAGGAGGGAGGTGGTGGGCCTCATTTTATCTTTAACCTCCAATGCCAACACCTCTTGTGGAGA
TTTAGCCCCCATTTTAGAGAGACTGGTGAGGCTGGACAGCACCCTGAAACTGCTGACCGAATCCGTGGGCGTGTGAGCCAGAAGG
TGAGCGCTTTCGAGAGCTCTTTAAAGGACACCAACTCCTCTTTAAAGCAAAGTACAGCCAGCATGACAGAAGTGTCCGGCGAGCTG
CACCAGCTGCACGCCTCTTTAGGCGAGCTGGATACCAGCGTGTGGACATGTCCGCCACTTTAACCAAGCACGGAAATTTAATCAC
CGCTTTACAGACCAGCGTGCAGAACAACGCTAACGCCATCTCCAATTTAAAGAGCAGCGTGTCCGCTTTAGGACTGAGCGTGACAG
ACATCGACGGTTCGTCTGAAGGCTGTGGAGAGCGGCAGCGGCAGCCCTTTAAAGTCTCCACCCCTCTGAAGCTGGACGGCGGCGTG
GTGTCTTTAGACATGGACCCCTACTTCTGCAGCGACAACCACGTGCTGACAGCTATTCCACCGACGCCAGCTGATGCAGTTCCA
GTGGCTCGCTAGAGGCGCTGATGGCAGCTCCGGAAGCGTGCACATGCTGGTGAACGCCACTGTCTATGGCAGAAGGACCGACTACA
TGATGTCCACCACCAGAAATTTAACCATCACCGGCAACAGCACCAGCCTCGTGTCAATTTAGACTACATCACCAGCCCCCACC
GACATGCCAGACTGATTCCTAGAGCTGGCTTCCAAGCCGCCAGCTTCCCCGTGGATGTGAGCTTACAAGAGACGACACCACACA
CGCCTACCAAGTGTACGGCACCTTACCAGCCCTCGTGTGTTCAAGATCACCTTTTAACTGGTGGCGCTGGCACCGCCAATTTAA
GATTTTTAACAGTGAGGACCGGAATCGACACC

Wild-type sequence of SKM121-S1 segment-sigma C

ATGGCCGCTCTAACTCCGTCACAGCGAAGAGAAGTCGTGGGATTGATACTCCTTGACTTCCGACCGGAATACAAGTTGTGGAGA
TTTGGCGCCGATACTCGAACGGTTGGTTAGGCTAGACTCCACTGTTAAGTTGTTGACTGAATCTGTGGGTGTCTGTCTCAGAAGG
TATCTGCCTTCGAGTCTAGTTTAAAGACACTAATCTTCTTAAAGTAAAGTTACTGCATCAATGACTGAGCTGTCCGGTGAACCT
CATCAACTCCATGCGTCCCTTGGTGACGTTGACACGTCGGTATTGGACATGTCCGCGACTTTAACTAAGCATGGTAATTTGATAAC
CGCTCTGCAGACTTCCGTGCAGAATAATGCGAATGCGATTAGTAATTTGAAGAGCAGTGTGTCTGCTCTGGGTCTAAGTGTACTG
ATATTGATGGGCGTTTGAAGGCTGTGAATCGGGTTCGGGCTCCCCACTGAAGTCTCAACTCCTCTGAAGCTTGACGGTGGCGTA
GTGTCTTTAGACATGGACCCGACTTTTGTTCAGATAATCATGTCTTAACCTCATATTCTACAGACGCTCAACTCATGCAATTTCA
GTGGCTGGCGCGTGGTGCAGATGGATCTTCTGGTCCGTCGATATGCTTGTAAACGCGCACTGTACGGGCGCCGAAGTATTACA
TGATGTGACTACAGAGAACCCTACTATTACTGGTAACTCTACCTCCTTAGTTTTCAACCTAGATTACATTACCAAGCCGCCACT
GACATGTCACGCTCTATTCCACGCGCTGGATTTCAAGCTGCTTCTTCCCGGTGGATGTGTCTATTACTCGTGTGACACGACGCA
CGCTTACCAGGTATATGGTACATTCAGTACCCGCGCTTTAAGATCACATTTCTACTGGGGGGCTGGGACTGCGAACCTCC
GTTTCTTGACCGTGCCTACGGGCATCGACACC

Codon optimized sequence of SKM121-S3 segment-sigma B

ATGGAGGTGAGGGTGCCAACTTCCACTCCTTCGTCGAGGGCATTACCTCCTCCTATATCAGAGCCCCCGCTTGTGGAAACGCCAA
GACCATGTGGGATGTGGAGACCTTTTCAATTAACCCGAGTGATCAAGGTGGGCAACGCCTACTGTTGCTCCAGTGTGCGGCGTGC
TGTACTACGGAGCTCCCCCAGCGATGGCAACTACTTCCCCCACCACAAGTGCCACCAGCAGCAGTATCGTTCCGACACCCCTTTA
CTGAGATACGTGAGAACTCGGAAGGACCACCGAGCATTTACTGGATCAGTACGCCGTGACTTTACAGACACTTCCGACATATTACGA
CGAGACCTCCCATCGTGTGGTGTGATGACAGCGAGGACACCATCCGCGCTTTAGATATCGTGACTCGTACCGAGACATTCAGAA
GCGACCAAGCTGTGGACGCCGACTTCTGGACCTACCTTTAGAGAGGAGGACGATGACTCTCGTAGGGATATCGCCGACGATC
TGGACCATGATCGACGCCAGCGCTCGTAGCTTACCTTTACCCGACTGTCTGGTGGAGCCCTAGCCTCCACTCTCGTCACGTGTTTCA
CCAGATGCTGACCACAACCAGCATCTACGATGTGGCCGCTTCCGGCAAGACAGCTCGTTTCTCCCCATGGTGGCCGCTCTGCCTC
AAAGAGCCGCTGGCCCATCACTTTACCCGATGCCGACCTCTGGAGCGGTGGCTACCTTCTGGAGCCCCAGTTCGCCCTCTCC
CCTATGATCGGCGCGTGGGCATTACCCGACAGTACGCTCGTGAGTCTTACCACCAGTGGGCCACCCCGTGTGCGGAAGCGGCAA
GAAGGTCTCCCACTATCGTAATTTATTCATGGATGCTTGGAGAGGATGGAGCAAGTCTCCTTACATGTGCCGCCGTTTAGAAC
CCGCTGAATGCGAGACTGAGGGCCATGCTCGTACCATGCTGGCAGATCTTTACCCGCGTGTGTGACTGCGGCAGCGAA
GCTCAGCCTAGGACCGCCCTAGCTCTTTACAGAAGGCCACCAAGCTGACCTTCATGGAGTGTGGCTGG

Wild-type sequence of SKM121-S3 segment-sigma B

ATGGAGGTACGTGTGCCAACTTTTCACTCTTTTGTGAAGGCATTACATCGAGTTACATTAGAGCTCCTGCTTGTGGAATGCGAA
AACGATGTGGGATGTTGAGACTTTCCATCTTCCGGATGTAATCAAGTTCGGTAATGCTTATTGTTGCTCGCAATGCTGTGGAGTGT
TGTATTATGAGAGCCCTCCCTCTGATGAAACTATTTCTCACCACAATGTCAACAGCAGTATCGCAGTGACACCCCTCTC
TTGCGTTACGATCAGAAATTTGGGCGCACAACTGAGCATCTTCTGGACCAATACGCCGTACCCTCCAGCTATCGCTGATTATTATGA
TGAGACGAGCCATCGCGTCCGATGATTCTGAAGAAGACACCATAGCTGCCCTTGACATTGTGACGAGAAGTGAATCTATCCGTA
GTGACCAAGCCGTGGATGCTGATTTTTGGACGTACCCCTCGAACGACGATCTGACGACTCCCGCGTGTGACATCGTCTTCAAT
TGGACGATGATTGATGCTTCCGCGCTAGTTTTACGTTGCCTGATGTCTTGTCTCCCGTCCGCTCCACTCACGTGATTTTTTGA
TCAAATGCTGACTACTACGTCTATTTATGACGTGCTGCTCAGGAAAGACGGCTAGATTTAGTCCAATGGTGGCTGCTCTTCCAC
AACCGCTGCGGTCGATTTACACTTCCAGACGCTGACCCGCTTGTGGAGTACCCAGCTTCTGGTCACTCAGTTTGTCTTTTCA
CCTATGATTGGTGGCTTGGCATTACAGGGCAATACGCGCTGAATCATATCACCATGTGGGACACCCCTGTCTATGGGAGCGGAAA
GAAAGTATCGCACTACCGCAACCTCTTCATGGACGCGTGGCGTGGTGGTTCGAAGTCTGCTTTTACGTTGTGCTGCTGGTCTGGAAC
CTGCTGAGTGTGAGTCTGCTTCTGTTGGGACGCGAGAACGATGCTCGGTGCTGCTTGCCTGGAGTATGCGACTGTGGATCCGAG
GCTCAGCCCAGGACCGCGCTTCTCTGCAAAAGGCTACTAACTGACTTTTTATGGAGTGTGGTTGG