

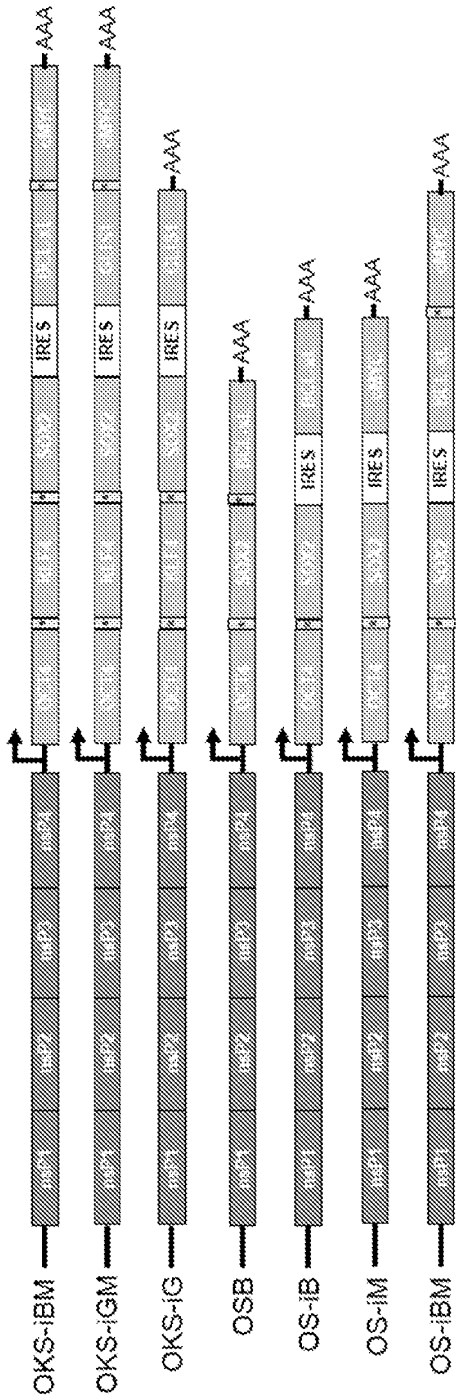


FIG. 1

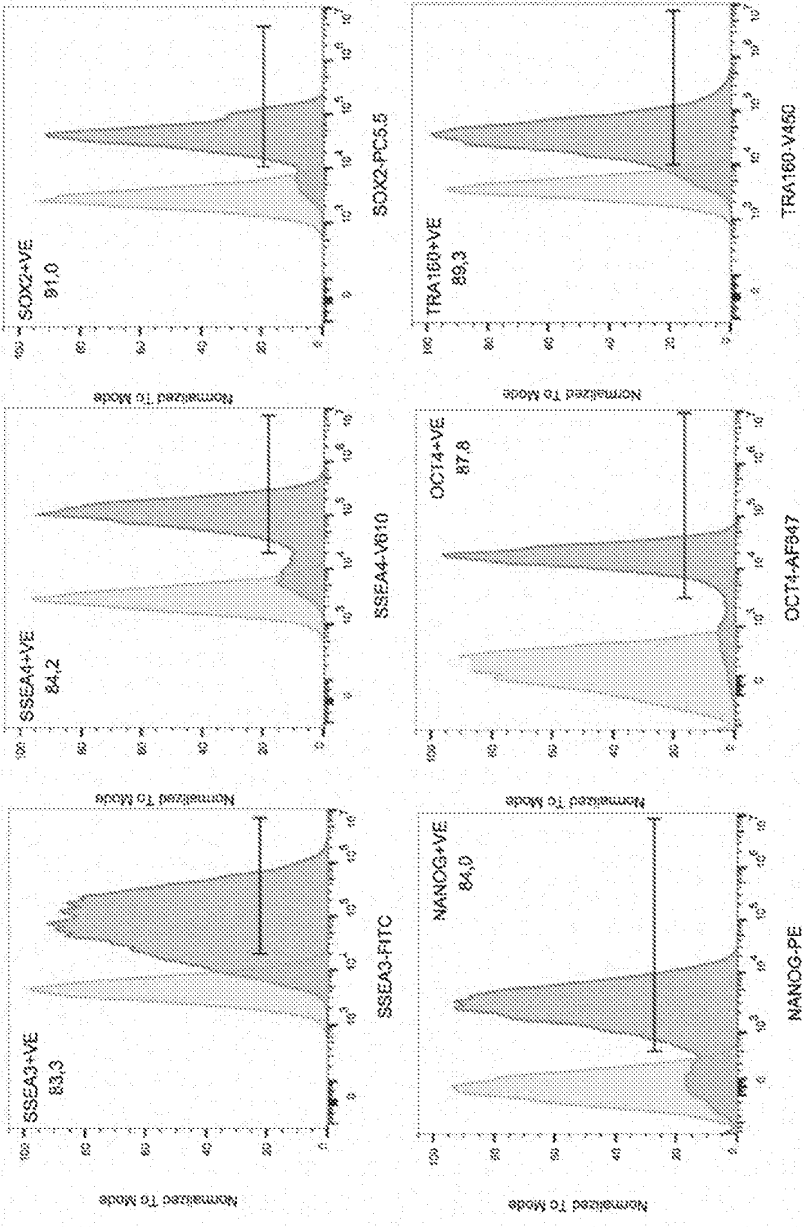


FIG. 2A

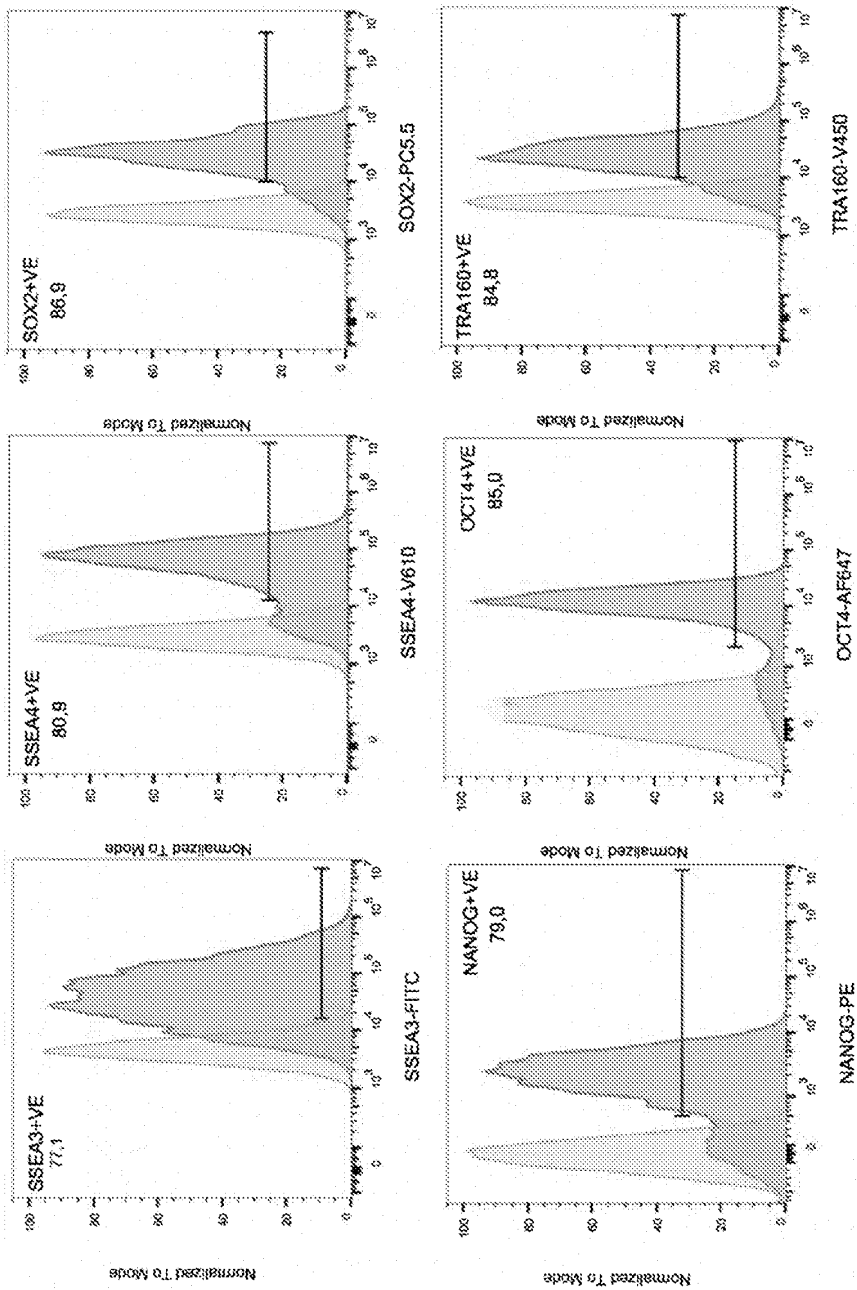


FIG. 2B

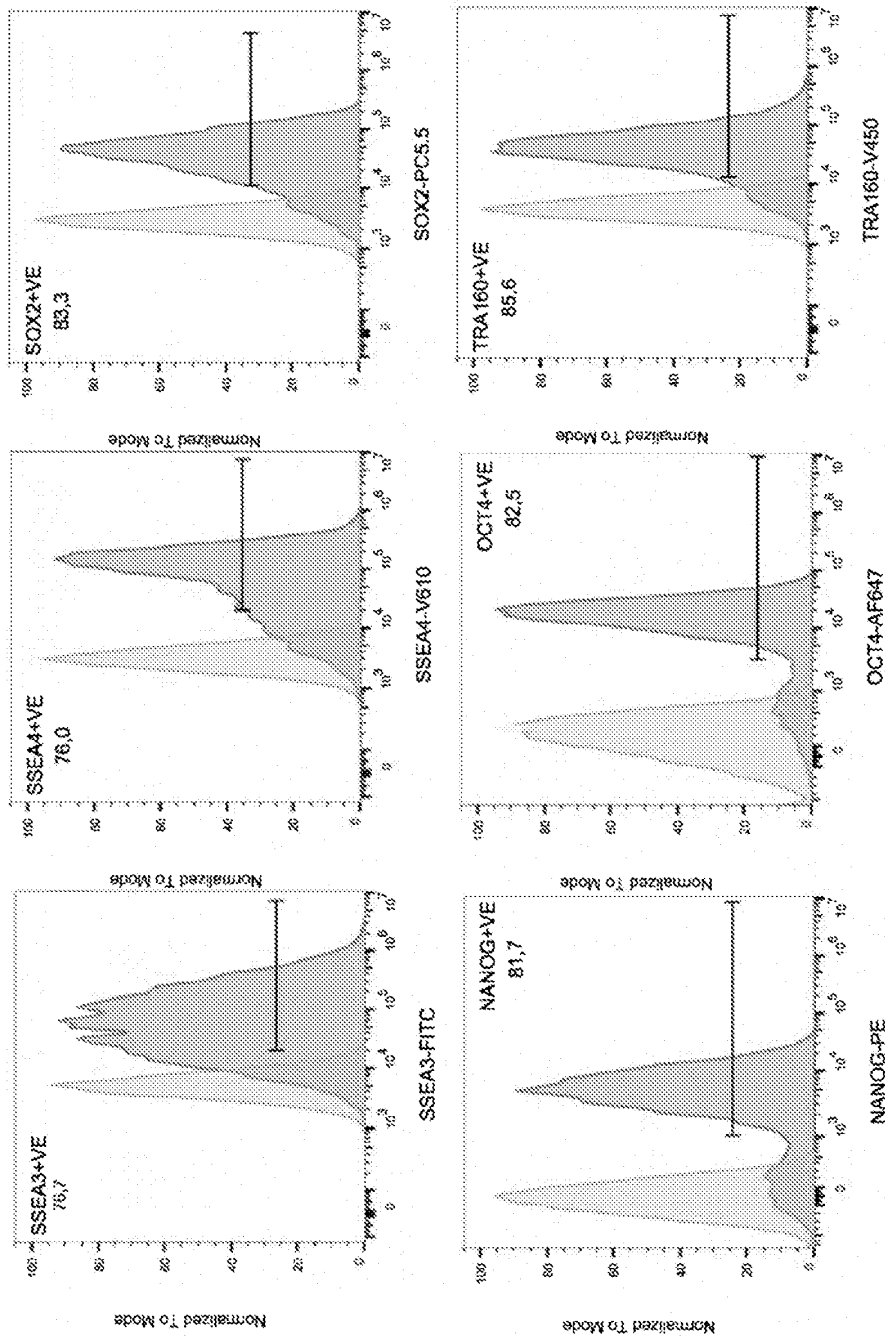


FIG. 2C

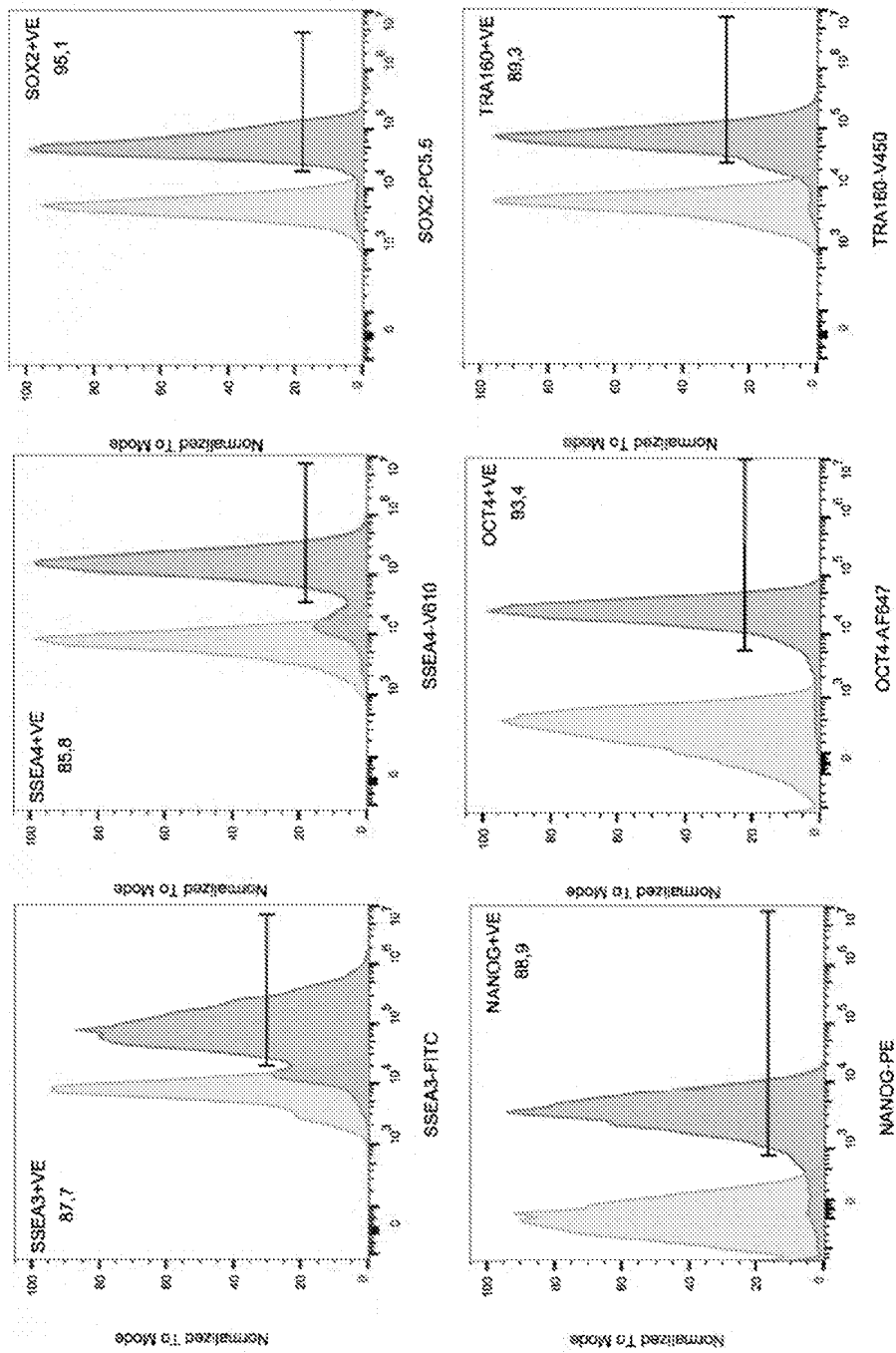


FIG. 2D

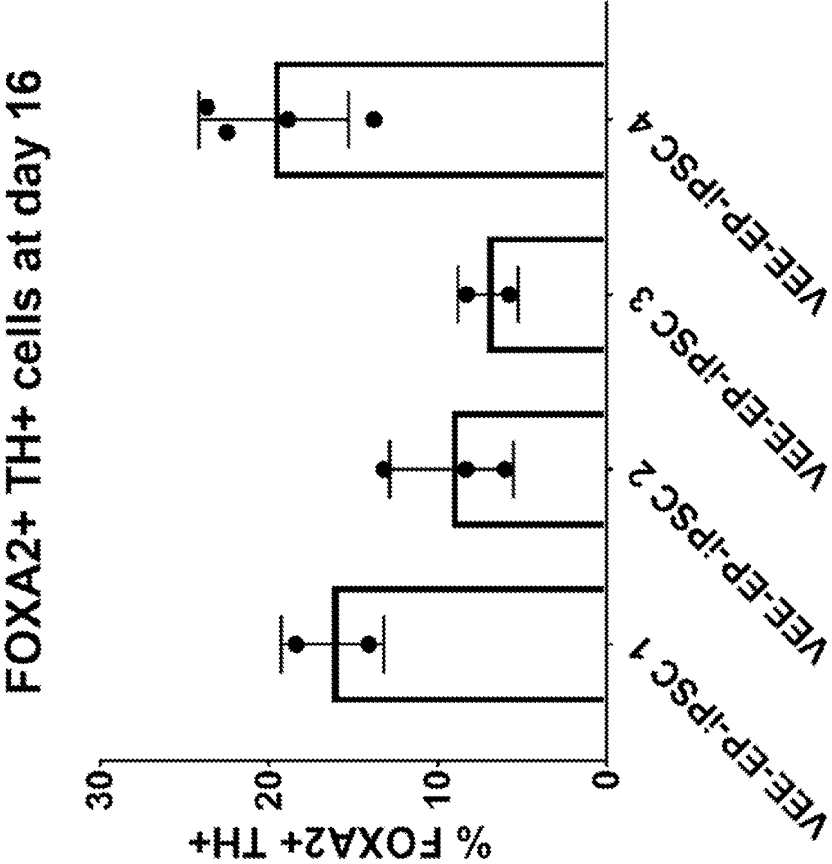


FIG. 3

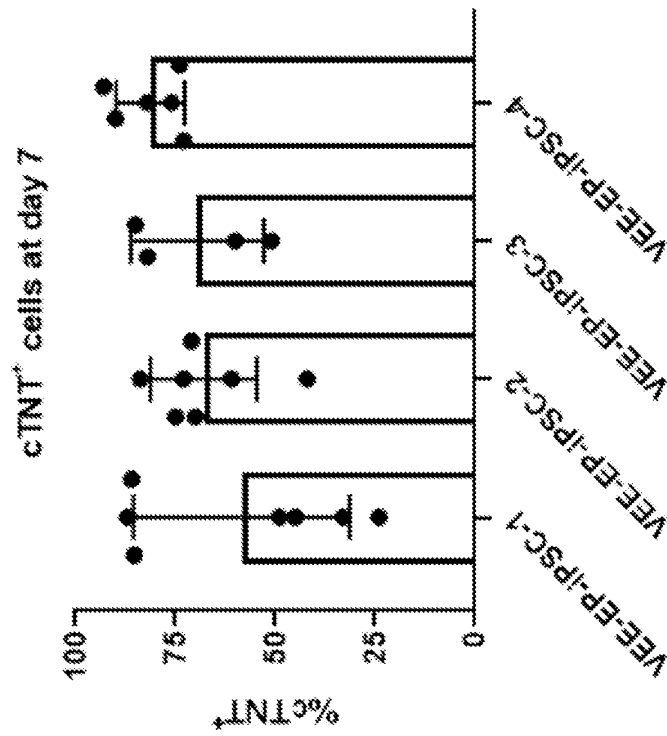


FIG. 4

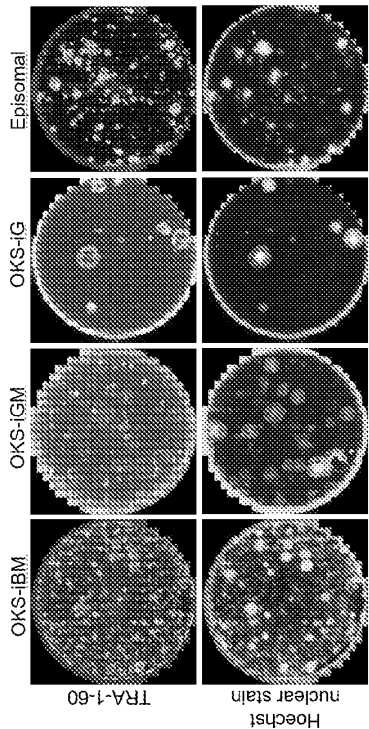


FIG. 5A

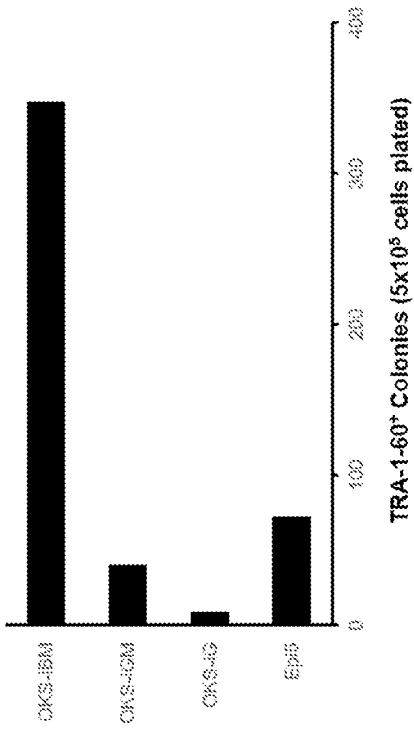


FIG. 5B

>Wildtype VEEV Genomic Sequence

GAAAGTTCACGTTGACATCGAGGAAGACAGCCCATTCCTCAGAGCTTTGCAGCGGAGCTTCCCGCAGTTTGAGGTAGAAGCCAA
GCAGGTCACGTGATAATGACCATGCTAATGCCAGAGCGTTTTCGCATCTGGCTTCAAAACCTGATCGAAACGGAGGTGACCCATCC
GACACGATCCTTGACATTGGAAAGTGCGCCGCCGAGAAATGTAATTTAAGCACAAAGTATCATTTGTATCTGTCCGATGAGATGTG
CGGAAGATCCGGACAGATTGTATAAGTATGCAACTAAGCTGAAGAAAACCTGTAAAGGAAATACTGATAAGGAATTGGACAAG
AAATGAAGGAGCTCGCCGCTCATGAGCGACCTGACCTGGAACTGAGACTATGTGCCCTCCACGACGACGAGTCGTGTGCG
TACGAAGGGCAAGTCGCTGTTTACCAGGATGTATACCGGGTTGACGGACCGACAAAGTCTCTATCACCAAGCCAATAAGGGAGTT
AGATCGCCTACTGGATAGGCTTTTGACACCAACCCCTTTTATGTTTAAGAACTTGGCTGGAGCATATCCATCATCTCTACCAACTG
GGCCGACGAAACCGTGTAAACGGCTCGTAACATAGGCCTATGCAGCTCTGACGTTATGGAGCGGTACGTAAGAGGATGTCCAT
TCTTAGAAAGAAATTTGAAACCATCCAAACATGTTCATTCTCTGTGGCTCGACCATCTACCAGAGAGAGGGACTTACTG
AGGAGCTGGCACCTGCCGCTGTATTCTACTTACGTGGCAAGCAAAATTACATGTGGGTGAGACTATAGTTAGTTGCGACG
GGTACGTCGTTAAAAGAATAGCTATCAGTCCAGGCCTGTATGGGAAGCCTTCAGGCTATGCTGCTACGATGCACCGGAGGGATT
CTTGCTGCAAAAGTGACAGACACATTGAACGGGAGAGGGTCTCTTTTCCCGTGTGCACGTATGTGCCAGCTACATTGTGTGAC
CAAATGACTGGCATACTGGCAACAGATGTACGTGCGGACGACGCGCAAAACTGCTGTTGGGCTCAACCAGCGTATAGTCGTC
AACGTCGCACCCAGAGAAACACCAATACCATGA AAAATTACCTTTTGCCCGTAGTGGCCCAAGGCAATTTGCTAGGTGGCAAAAG
GAATATAAGGAAGATCAAGAGATGAAGGCCACTAGGACTACGAGATAGACAGTTAGTCAATGGGTGTTTGTGGCTTTTAGA
AGGCACAAGATAACATCTATTTATAGCGCCCGGATACCCAAACCATCATCAAAAGTGAAACAGCGATTTCCACTCATCTGCTGC
CCAGGATAGGCAGTAACACATTGGAGATCGGGCTGAGAACAGATCAGGAATATGTTAGAGGAGCAACAGGAGCCGTCACCT
CTCATTACCCCGGAGACGTACAAGAGCTAAGTGGCAGCCGATGAGGCTAAGGAGGTGCGTGAAGCCGAGGAGTTGCGCGC
AGCTCTACCACTTTGGCAGCTGATGTTGAGGAGCCCACTCTGGAAAGCCGATGTCGACTTGTATTAACAAGAGGCTGGGCGCGC
TCAGTGGAGACACCTCGTGGCTTGATAAAGTTACCACTACGCTGGCGAGGACAAAGATCGGCTCTTACGCTGTCTTCTCCGC
AGGCTGTACTCAAGAGTGAAAATTATCTTGATCCACCCCTCTCGCTGAACAAGTCAATAGTGATAACACACTCTGGCCGAAAGG
GCGTTATGCCGTGGAACCATACCATGGTAAAGTAGTGTGCGCAGAGGGACATGCAATACCCGTCCAGGACTTTCAGCTCTGAG
TGAAAGTGCCACCATTTGTACAACGAACGTGAGTTCGTAACACAGTACCTGACGCAATATTGCCACACATGGAGGAGCGCTGAA
CACTGATGAAGAAATATTACAAACTGTCAAGCCAGCGAGCACGACGGCGAATACCTGTACGACATCGACAGGAAACAGTGCCT
CAAGAAAGAACTAGTCACTGGGCTAGGGCTACAGCGGAGCTGGTGGATCCCTCCCTTCCATGAATTCGCTACGAGAGTCTGAG
AACACGACGCGCTCTTACC AAGTACC AACCATAGGGGTGTATGGCGTGCCAGGATCAGGCAAGTCTGGCATCATTA

FIG. 6A

AGCGAGTCACCAAAAAATCTAGTGTGAGCGCCAAAGAAAAGAAACTGTGCAAGAAATTATAAGGGACGTCAAGAAAAATGAA
AGGGCTGGACGTC AATGCCAGAACTGTGGACTCAGTCTTGAATGGATGCAACACCCCGTAGAGACCCCTGTATATTGACGA
AGCTTTTGTCTGTGCATGCAGGTACTCTCAGAGCGCTCATAGCCATTATAAGACCTAAAAAGGCAGTGTCTGCGGGGATCCAAA
CAGTGCGGTTTTTTAAACATGATGTGCCCTGAAAAGTGCATTTTAAACCACGAGATTITGCACACAAAGTCTTCCACAAAAAGCATCTCTCG
CCGTTGCACTAAATCTGTGACTTCGGTCTCTCAACCTTGTGTTTACGACAAAAAATGAGAACGACGAATCCGAAAGAGACTAAG
ATTGTGATTGACACTACCGGCAGTACCAAACTAAGCAGGACGATCTCATTTCTCACTTGTTCAGAGGGTGGTGAAGCAGTTGC
AAATAGATTACAAAGGCAACGAAATAATGACGGCAGTGCCTCAAGGGCTGACCCGTAAAGTGTGTATGCCGTTCCGTACA
AGGTGAATGAAAATCCTCTGTACGCCACCACTCAGAACATGTGAACGTCTACTGACCCGACCGGAGCCGCATCGTGTGGA
AAACACTAGCCGGCGACCCATGGATAAAAACACTGACTGCCAAGTACCTGGGAAATTTCACTGCCACGATAGAGGAGTGGCAAG
CAGAGCATGATGCCATCATGAGGCACATCTTGGAGAGACCGGACCCCTACCGACGTCTCCAGAATAAGGCAAAACGTGTGTGGG
CCAAAGGCTTTAGTCCCGTGTGAAGACCCGTGGCATAGACATGACCACTGAACAATGGAACACTGTGGATTATTTGAAACGG
ACAAAGCTCACTCAGCAGAGATAGTATTGAACCAACTATGCGTGAGGTCTTTGGACTCGATCTGGACTCCGGTCTATTTCTGC
ACCCACTGTTCCGTTATCCATTAGGAATAATCACTGGATAAATCCCCGTCGCCTAACATGTACGGGCTGAATAAAGAAAGTGGTC
CGTCAGCTCTCTCGCAGGTACCCACAACTGCCCTCGGGCAGTTGCCACTGGAAGAGTCTATGACATGAACACTGGTACACTGCCGA
ATTATGATCCGCGCATAAACCTAGTACCTGTAAACAGAAAGACTGCCCTATGCTTTAGTCTCCACCATAAATGAACACCCACAGAG
TGACTTTTCTTCATTCTCAGCAAAATTGAAAGGCGAAGCTGTCTGTTGGTGGGAAAGTTGTCTCCAGGCAAAAATGGTT
GACTGGTTGTACAGCCGGCTGAGGCTACCTTCAGAGCTCGGCTGGAATTTAGGCATCCAGGTGATGTGCCC AATATGACATAA
TATTTGTTAATGTGAGGACCCCATATAAATACCATCACTATCAGCAGTGTGAAGACCATGCCATTAAGCTTAGCATGTTGACCAA
GAAAGCTTGTCTGCATCTGAATCCCGGGGAACCTGTGTCAAGCATAGGTTATGGTTACGCTGACAGGGCCAGCGAAAGCATCAT
GGTGTATAGCGCGGCGAGTTCAAGTTTCCCGGGTATGCAACCCGAATCCTCACTTGAAGAGACGGAAGTTCTGTTGTATTC
TTGGGTACGATCGCAAGGCCCGTACGCACAAATCCTTACAAGCTTTCATCAACCTTGACCAACATTATACAGGTTCCAGACTCCA
CGAAGCCGGATGTGCAACCTCATATCATGTGTGCGAGGGGATATTGCCACGGCCACCGAAGGAGTGATTATAAATGCTGCTAA
CAGCAAGGACAACCTGGCGGAGGGGTGTGCGAGCGCTGTATAAGAAATCCCGGAAAGCTTCGATTTACAGCCGATCGAAGT
AGGAAAAGCGCGACTGGTCAAGGTGCAAGCTAAACATATCATTTATGCCGTAGGACCAAACTTCAACAAAGTTTCGGAGGTTGA
AGGTGACAAACAGTTGGCAGAGGCTTATGAGTCCATCGCTAAGATTGTCAACGATAACAAATTACAAGTCAGTAGCGATTCCACT
GTTGTCCACCGGCATCTTTCCGGGAACAAAGATCGACTAACCCAAATCATTTGAACCATTTGCTGACAGCTTTAGACACCACTGAT
GCAGATGTAGCCATATACTGCAGGGACAAGAAATGGGAAATGACTCTCAAGGAAGCAGTGGCTAGGAGAGAAAGCAGTGGAGGA
GATATGCATATCCGACGACTCTTCAGTGACAGAACCTGTATGACAGCTGGTGAGGGTGCAATCCGAAAGAGTTCTT

FIG. 6A cont'd

TGGCTGGAAGGAAGGGCTACAGCACAGCGATGGCAAAACTTTCTCATATTTGGAAGGAGACCAGTTTACCAGGGGCCAAGG
ATATAGCAGAAATTAATGCCATGTGGCCCGTTGCAACGAGGCCAATGAGCAGGTATGCATGTATATCCTCGGAGAAAGCATGA
GCAGTATTAGGTCGAATGCCCCGTGCGAAGAGTCGGAAGCCTCCACACCACCTAGCACGCTTGCTTGTCATCCATGCCAT
GACTCCAGAAAGAGTACAGCGCCTAAAGCCTCAAGTCCAGACAATAATCTGTGTGCTCATCTCTTCCATTGCCGAAGTATAGA
ATCACTGGTGTGCAGAGATCCAAATGCTCCAGCCTATATTGTTCTACCGAAAGTGCTGCGTATATTCATCCAAGGAAGTATC
TCGTGGAACACACCACCGGTAGACGAGACTCCGGAGCCATCGGCAGAGAACCAATCCACAGAGGGGACACCTGAACAACCA
CTTATAACCGAGGATGAGACCAGGACTAGAACCGCTGAGCCGATCATCAGAGGAAGAAGAGGATAGCATAGTTTGCTG
TCAGATGGCCCGACCCACCAAGGTGCTGCAAGTCGAGGCAGACATTACCGGCCCGCTCTGTATCTAGCTCATCTCGTCCATTC
CTCATGCATCCGACTTTGATGTGGACAGTTTATCCATACTTGACACCCCTGGAGGGAGCTAGCGTGACCGGGGCAACGTCAGC
CGAGACTAACTCTTACTTCGCAAGAGTATGGAGTTTCTGGCGGACCGGTGCTGCGCTCGAACAGTATTCAGGAACCCCTCCA
CATCCCGCTCCCGGCACAAGAACCCGTCATTGCAACCCAGCAGGGCCTGCTCGAGAACCAAGCCTAGTTTCCACCCCGCCAGGCG
TGAATAGGGTGATCACTAGAGAGGAGCTCGAGCGCTTACCCCGTCACGCACTCTAGCAGGTGCTCGAGAACCAAGCCTGG
TCTCCAACCCGCCAGGCGTAAATAGGGTGATTACAAGAGAGGAGTTTGAGGCGTTCTGTAGCAACAACAATGACGCGTTTGATG
CGGGTGCAATACATCTTTTCTCCGACACCGGTCAAGGGCATTTACAACAAAATCAGTAAGGCAACGCTATCCGAAGTGGT
GTTGGAGAGGACCGAATTGGAGATTTCGTATGCCCGCGCTCGACCAAGAAAAGAGAATTAACGCAAGAAATTAACAGTT
AAATCCCAACCTGCTAACAGAGCAGATACCCAGTCCAGGAAGGTGGAGAACATGAAAGCCATAACAGCTAGACGTATTCGTCA
AGGCTAGGGCATTAATTTGAAGGCAGAGAAAGTGGAGTGTACCGAACCTGCATCTGTCTCTTTGTATTCATCTAGTGTG
AACCGTGCCCTTTCAAGCCCCAAGGTCGCAGTGGAAGCCTGTACGCCATGTTGAAGAGAACCTTTCCGACTGTGGCTTCTTACT
GTATTATCCAGAGTACGATGCCTATTTGGACATGGTTGACGGAGCTTCAATGCTGCTTAGACACTGCCAGTTTGGCCTGCAAAAG
CTGCGCAGCTTTCCAAAGAAACACTCCTATTTGGAACCCACAATACGATCGGCAAGTGCCTTCAAGCATCCAGAACACGCTCCAGA
ACGTCTGGCAGCTGCCACAAAAGAAATTGCAATGTCACGCAATGAGAGAAATTGCCGTATTGGATTCCGGCGGCTTTAATGT
GGAATGCTTCAAGAAATATGCGTGTAAATGAATATTGGGAACCGTTTAAAGAAAACCCCATCAGGCTTACTGAAGAAAACGT
GGTAAATTACATTACCAATTAAAGGACCAAAAGCTGCTCTTTTTCGGAAGACACATAATTTGAATATGTTGCAGGACATA
CCAATGGACAGGTTTGTAAATGGACTTAAAGAGAGACGTGAAAGTGACTCCAGGAACAAAACATACTGAAGAACGGCCCAAGGT
ACAGGTGATCCAGGCTGCCGATCCGCTAGCAACAGCGTATCTGTGCGGAATCCACCGAGAGCTGGTTAGGAGATTAAATGCGGT
CCTGCTTCCGAACATTCATACACTGTTTGATATGTCGGCTGAAGACTTTGACGCTATTATAGCCGAGCACTTCCAGCCTGGGGATT
GTGTTCTGGAAACTGACATCGCGTCGTTTGATAAAAGTGAGGACGACGCCATGGCTGACCGCGTTAATGATTCTGGAAGACTT
AGGTGTGACGCAGAGCTGTGACGCTGATTGAGGCGGCTTTCGGCGAAATTTCAATCAATACATTGGCC

FIG. 6A cont'd

CACTAAAACTAAATTTAAATTCGGAGCCATGATGAAATCTGGAATGTTCCCTCACACTGTTTGTGAACACAGTCATTAAACATTGTA
ATCGCAAGCAGAGTGTTGAGAGAACGGCTAACCGGATCACCATGTGCAGCATTCATTGGAGATGACAAATATCGTGAAAGGAGTC
AAATCGGACAAATTAATGGCAGACAGGTGCGCCACCTGGTTGAATATGGAAGTCAAGATTATAGATGCTGTGGTGGCGAGAAA
GCGCCTTATTTCTGTGGAGGGTTTATTTGTGTGACTCCGTGACCGGCACAGCGTGCCTGTGGCAGACCCCTAAAAGGCTGT
TTAAGCTTGGCAAACTCTGTGCAGCAGACGATGAACATGATGATGACAGGAGAGGGCATTGCATGAAGAGTCAACACGCTGGA
ACCGAGTGGGTATTTTCAGAGCTGTGCAAGGCAGTAGAATCAAGGTATGAACCGTAGGAACCTCCATCATAGTTATGGCCAT
GACTACTTAGCTAGCAGTGTTAAATCATTACGTAACCTGAGAGGGGCCCTATAACTCTCTACGGCTAACCTGAATGGACTACG
ACATAGTCTAGTCCGCCAAGTCTAGCATATGGGCGCGTGAATTCGCC*GCCAATTGGCAAGCTGCTTACATAGAACTCGCGGCGA
TTGGCATGCCGCCTTAAATTTTATTTTATTTTCTTTTCTTTTCCGAATCGGATTTTGTTTTAAATATTCAAAAAA
AAAAA (SEQ ID NO:14)

FIG. 6A cont'd

>Recombinant VEEV Genomic Sequence

GAAAGTTCACGTTGACATCGAGGAAGACAGCCCATTCCTCAGAGCTTTCAGCGGAGCTTCCCGCAGTTTGAGGTAGAAGCCAA
GCAGGTCACATGATAATGACCATGCTAATGCCAGAGCGTTTTCGCATCTGGCTTCAAAACTGATCGAAACGGAGGTGACCCATCC
GACACGATCCTTGACATTGGAAAGTGCCTCCCGCCGAGAAATGTAATTTAAGCACAAAGTATCATTTGTATCTGTCCGATGAGATGTG
CGGAAGATCCGGACAGATTGTATAAGTATGCAACTAAGCTGAAGAAATACTGTAAAGGAAATACTGATAAGGAAATTGGACAAG
AAATGAAGGAGCTGGCCCGCTCATGAGCGACCTGACCTGGAAACTGAGACTATGTGCCCTCCACGACGACGAGTCGTGTCGC
TACGAAGGGCAAGTCGCTGTTTACCAGGATGTATACCGGTTGACGGACCGAACAGTCTCTATACCAAGCCAATAAGGGAGTT
AGATCGCCTACTGGATAGGCTTTTGACACCAACCCCTTTTATGTTTAAAGAACTTGGCTGGAGCATATCCATCATCTACTCTAACACTG
GGCCGACGAAACCGTGTAAACGGCTCGTAACATAGCCCTATGCAGCTCTGACGTTATGGAGCGGTACGTAAGAGGGATGTCCAT
TCTTAGAAAGAAATTTGAAACCATCCAAACATGTTCTATCTCTGTGGCTCGACCATCTACCAAGAGAGGGACTTACTG
AGGAGCTGGCACCTGCCGTCTGTATTTCACCTACGTGGCAAGCAAAATTACACATGTCCGTGTGAGACTATAGTTAGTTGCGACG
GGTACGTCGTTAAAGAAATAGCTATCAGTCCAGGCCGTGATGGGAAGCCCTCAGGCTATGCTGCTACGATGCACCGCGAGGGATT
CTTGTCGTCGAAAGTGACAGACACATTGAACGGGAGAGGGTCTCTTTTCCCGTGTGACGCTATGTGCCAGCTACATTGTGTGAC
CAAATGACTGGCATACTGGCAACAGATGTCAGTGGACGACGCGCAAAACTGCTGTTGGGCTCAACCAGCGTATAGTCGTC
AACGGTCGCACCCAGAGAAACACCAATACCATGAATAATTACCTTTTGCCCGTAGTGGCCAGGCAATTTGCTAGGTGGCAAAAG
GAATATAAGGAAGATCAAGAGATGAAGGCCACTAGGACTACGAGATAGACAGTATGTCATGGGGTGTGTTGGCTTTTAGA
AGGCACAAGATAACATCTATTATTAAGCGCCCGGATACCCAAACCATCATCAAGTGAAACAGCGATTTCCACTCATTCGTGCTGC
CCAGGATAGGCAGTAACACATTGGAGATCGGGCTGAGAACACAGAAATCAGGAAATGTTAGAGGAGCAACAAGGAGCCGTCACT
CTCATTACCGCGGAGACGTACAAGAAAGCTAAGTGGCAGCCGATGAGGCTAAGGAGGTGCGTGAAAGCCGAGGAGTTGCGCGC
AGCTCTACCACTTTGGCAGCTGATGTTGAGGAGCCCACTCTGGAGGAGGCTGTCGACTTGATGTTACAAAGAGGTGGGCGCGG
CTCAGTGGAGACACCTCGTGGCTTGATAAAGGTTACAGCTACGATGGCGAGGACAAGATCGGCTCTTACGCTGTGCTTTCTCCG
CAGGCTGTACTCAAGAGTGAAATAATTATCTTGCATCCACCTCTCGCTGAACAAGTCAATAGTGATAACACACTCTGGCCGAAAG
GGCGTTATGCCGTGGAACCATACCATGGTAAGTAGTGTGCCAGAGGGACATGCAATACCCGTCCAGGACTTTCAAGCTCTGA
GTGAAAGTGCCACCATTTGTGTACACGAACGTGAGTTCTGTAACAGGTACCTGCCACCATATTGCCACACATGGAGGAGCGCTGA
ACACTGATGAAGAAATATTACAAACTGTC AAGCCCCAGCGAGCACGCGCGAATACCTGTACGACATCGACAGGAAACAGTGC
GTCAAGAAAGAACTAGTCACTGGGCTAGGGCTCACAGGGCAGCTGGTGATCTCCCTTCCATGAATTCGCCTACGAGAGTCTG
AGAAC

FIG. 6B

CGACCAGCCGCTCCTTACCAAGTACCAACCATAGGGGTGTATGGCGTGCCAGGATCAGGCAAGTCTGGCATCATTAAGAGCGCA
GTCACCAAAAAAGATCTAGTGTGAGCGCCAAAGAAAGAAACTGTGCAAGAAATATAAGGGACGTCAAGAAAAATGAAAGGGCT
GGACGTC AATGCCAGAAC TGTGGACTCAGTGCTCTTGAATGGATGCAACACCCCGTAGAGACCCTGTATATTGACGAAGCTTTT
GCTTGTCAATGTCAGGTACTCTCAGAGCGCTCATAGCCATTATAAGACCTAAAGACCTAAAGGCAAGTGTCTGCGGGGATCCCCAAACAGTGC
GGTTTTTTTAAACATGATGTGCTGAAAGTGCATTTTAAACACGAGATTTGCACACAAGTCTTCCACAAAAGCATCTCTCGCCGTTG
CACTAAATCTGTGACTTCGGTCGTCTCAACCTTGTTTTACGACAAAATAATGAGAACGACGAATCCGAAAGAGACTAAGATTGTG
ATTGACACTACCGGCAAGTACCAACCTAAGCAGGACGATCTCATCTCACITTTTCAGAGGGTGGTGAAGCAGTTGCAAAATAG
ATTACAAAGGCAACGAATAATGACGGCAGCTGCTCTCAAGGGCTGACCCGTAAAGTGTGTATGCCGTTCCGTACAAAGGTGA
ATGAAAATCCTCTGTACGCACCCACCTCAGAACATGTGAACGTCTACTGACCCGACCGGAGCCGCATCTGTGTGGAAAAACAC
TAGCCGGCAGCCCATGGATAAAACACTGACTGCCAAGTACCTGGGAATTTCACTGCCACGATAGAGGAGTGGCAAGCAGAGC
ATGATGCCATCATGAGGCACATCTTGGAGAGACCGGACCCCTACCGACGTCTCCAGAATAAGGCAAAACGTGTGTGGGCCAAGG
CTTTAGTCCCGGTGCTGAAGACCGCTGGCATAGACATGACCACTGAACAATGGAACACTGTGGATTATTTGAAAACGGACAAAAG
CTCACTCAGCAGAGATAGTATTGAACCAACTATGCGTGAGGTTCTTTGGACTCGATCTGGACTCCGGTCTATTTTCTGCACCCACT
GTTCCGTTATCCATTAGGAATAATCACTGGGATAACTCCCGCTCGCCTAACATGTACGGGTGAATAAGAAAGTGGTCCGTCAGC
TCTCTCGCAGGTACCCACAACCTGCCCTCGGGCAGTTGCCACTGGAAGAGTCTATGACATGAACACTGGTACACTGCGCAATTATGA
TCCGCGCATAAACCTAGTACCTGTAAACAGAGAGACTGCCCTCATGCTTTAGTCTCCACCAATAATGAACACCCACAGAGTGACTTT
TCTTCATTCTGTCAGCAAAATTGAAGGCGAGAACTGTCTGGTGTGCGGGAAAAGTTGTCCGTCCCAGGCAAAATGGTTGACTGGT
TGTCAGACCGGCCTGAGGCTACCTTCAGAGCTCGGCTGGAATTTAGGCATCCCAGGTGATGTGCCCCAAATATGACATAATAATTGT
TAATGTGAGGACCCCATATAAATACCATCACTATCAGCAGTGTGAAGACCATGCCATTAAAGTTAGCATGTTGACCAAGAAAGCT
TGCTGCACTGTAATCCCGCGGAACCTGTGTGTCAGCATAGGTTATGGTTACGCTGACAGGGCCAGCGAAAGCATCATTTGGTGCTA
TAGCGCGGCAGTTCAAGTTTTCCCGGGTATGCAAAACCGAAATCCTCACTTGAAGAGACGGAAGTTCTGTTGTATTCTATTGGGTA
CGATCGCAAGGCCCGTACGCACAATTTCTTACAGCTTTCATCAACCTTGACCAACATTTATACAGTTCCAGACTCCACGAAAGCC
GGATGTGCAACCTCATATCATGTGTGCGAGGGGATATTGCCACGGCCACCGAAGGAGTGATTATAATGCTGCTAACAGCAAA
GGACAACCTGGCGGAGGGGTGTGCGGAGCGCTGTATAAGAAATTCCTGGAAAGCTTCGATTTACAGCCGATCGAAGTAGGAAAA
GCGCGACTGGTCAAAGGTGCAGCTAAACATATCATTCATGCCGTAGGACCAAACTTCAACAAAGTTTCGGAGGTTGAAGGTGAC
AAACAGTTGGCAGAGGCTTATGAGTCCATCGCTAAGATTGTCAACGATAACAAATTACAAGTCAGTAGCGATTCCACTGTTGTCCA
CCGGCATCTTTTCCGGGAACAAAGATCGACTAACCCCAATCAATTGAACCAATTGTGTCGACAGCTTATAGACACCACTGATGC

FIG. 6B cont'd

AGATGTAGCCATATACTGCAGGACAAAGAAATGGAAATGACTCTCAAGGAAGCAGTGGCTAGGAGAGAAAGCAGTGGAGGAGA
TATGCATATCCGACGACTCTTCAGTGACAGAACCTGATGACAGAGCTGGTGGGTGCATCCGAAGAGTCTCTTTGGCTGGAAGGA
AGGGCTACAGCACAAAGCGATGGCAAACCTTCTCATATTTGGAAGGGACCAAGTTTCACCAAGCGGCCAAGGATATAGCAGAAA
TTAATGCCATGTGGCCCGTTGCAACGGAGGCCAATGAGCAGGTATGATGTATATCCTCGGAGAAAGCATGAGCAGTATTAGGT
CGAAATGCCCCCGTCGAAGAGTCGGGAAGCCTCCACACACCTAGCACGCTGCCCTTGCTGTGCATCCTATGCCATGACTCCAGAAAAG
AGTACAGCGCCTAAAGCCTCACGTCCAGAACAAATTAATCTGTGTCTCATCTTCCATTTGCCGAAAGTATAGATCACTGGTGTG
CAGAAATCCAAATGCTCCCAAGCTATATTGTTCTCACCGAAAGTGCCCTGGTATATTCATCCAAAGGAAGTATCTCTGTGGAACAC
CACCGGTAGACGAGACTCCGGAGCCATCGGCAGAGAACCAATCCACAGAGGGGACACCTGAACAACCACTTATAACCGAG
GATGAGACCAGGACTAGAACGCTGAGCCGATCATCATCGAAGAGGAAGAAAGGATAGCATAAAGTTTGTCTGTCAGATGGCCC
GACCAACAGGTGCTCAAGTCGAGGAGACATTCACGGGCCGCCCTCTGTATCTAGCTCATCTCTGGTCCATCTCTCATGCATCC
GACTTGTGATGTGACAGTTTATCCATACCTTGACACCTGGAGGGAGCTAGCGTGACCAAGCGGGGCAACGTGAGCCGAGACTAAC
TCTTACTTCGCAAGAGTATGGAGTTTCTGGCGGACCCGGTGCCTCGACACAGTATTCAGGAACCCCTCCACATCCCGCTC
CGCGCACAAAGAACCCGTCACCTTGACCCACAGAGGCCCTGCTCGAAGAACAGCCTAGTTTCCACCCCGCAGGCGTGAATAGGG
TGATCACTAGAGAGGAGCTCGAGGCGCTTACCCCGTCAACGCTAGCAGGTGCGTCTCGAAGAACAGCCTGCTCTCCAAACCC
GCCAGGCGTAAATAGGGTGATTACAAGAGAGGAGTTTGAGCGCTTCGTAGCACAAACAATGACGGTTTGATGCGGGTGCATA
CATCTTTCTCCGACACCGTCAAGGGCATTTACACAAAATCAGTAAGGCAACCGTGTCTATCCGAAAGTGGTGTGGAGAG
GACCGAATTGGAGATTTTCGTATGCCCGCGCTTCGACCAAGAAAGAAAGAAATTAAGAAAGTACGCAAGAAATTAAGTTAAATCCCAC
ACCTGCTAACAGAAAGCAGATACCAAGTCCAGGAAGGTGGAGAACATGAAGCCATAAACAGCTAGACGTATTTCTGCAAGGCCTAG
GGCATTATTTGAAGGCAGAGGAAGAAAGTGAGTGTCTACCGAACCTGCATCTCTGTTTGTATTCATCTAGTGTGAACCGTGC
CTTTTCAAGCCCCAAGTCCGAGTGAAGCCGTGAACGCCATGTTGAAGAGAACCTTCCGACTGTGGCTTCTTACTGTATTATTC
CAGGTACGATGCCATTTTGGACATGGTTGACGGAGCTTCATGCTGCTTAGACACTGCCAGTTTTCCTGCAAGCTGCCGAG
CTTTCCAAAGAAACACTCCTATTTGGAACCCACAAATACGATCGGCAGTGCCTCAGCGATCCAGAACACGCTCCAGAACGTCCTG
GCAGCTGCCACAAAGAAATTGCAATGTACGCAATGAGAGAAATTGCCGTAATGGATTTCGGCGGCCCTTAAATGTGGAATGC
TTCAAGAAATATGCGTGTAAATGAATATTGGGAAACGTTTAAAGAAACCCCATCAGGCTTACTGAAGAAACGTTGGTAAAT
TACATTACCAATTAAGGACCAAAAGCTGCTCTTTTTCGGAAGACACATAATTTGAATATGTTGCAGGACATACCAATGG
ACAGGTTTGTAAATGAAAGAGAGACGTGAAGAGTGACTCCAGGAACAAAACATACTGAAGAACGGCCCAAGGTACAGGTG
ATCCAGGCTGCCGATCCGTAGCAACAGCGTATCTGTGCGGAATCCACCGAGAGCTGGTTAGGAGATTAAATGCGGTCTCTGCTTC
CGAACATTATCATACTGTTTGATATGTCGGCTGAAGACTTTGACGCTATTATAGCCGAGCACTTCCAGCCTGGG

FIG. 6B cont'd

GATTGTCTTGAAACTGACATCGCGTCGTTTGATAAAAAGTGAGGACGACGCCATGGCTCTGACCGCGTTAATGATTCGTGAAG
ACTTAGGTGGACGCAGAGCTGTTGACGCTGATTGAGCGGCTTTCGGCGAAATTTTCATCAATACATTTGCCCACTAAAACTAA
ATTTAAATTCGGAGCCATGATGAAATCTGGAATGTTCCCTCACACTGTTTGTGAACACAGTCATTAAACATTGTAAATCGCAAGCAGA
GTGTTGAGAGAACGGCTAACCGGATCACCATGTGCAGCATTCATTGGAGATGACAATATCGTGAAGAGAGTCAAATCGGACAAA
TTAATGGCAGACAGGTGCGCCACCTGGTTGAATATGGAAGTCAAGATTATAGATGCTGTGGGGCGAGAAAGCGCCTTATTCT
GTGAGGGTTTATTTGTGTGACTCCGTGACCGGCACAGCGTCCGTGTGGCAGACCCCTAAAAGGCTGTTTAAAGCTTGGCAA
ACCTCTGGCAGCAGATGAACATGATGATGACAGGAGAAAGGGCATTTGCATGAAGAGTCAACACGCTGGAACCGAGTGGTA
TTCTTTCAGAGCTGTGCAAGGCAGTAGAATCAAGGTATGAACCGTAGGAACCTCCATCATAGTTATGGCCATGACTACTCTAGC
TAGCAGTGTAAATCATTCAGTACCTGAGAGGGGCCCCATATACTCTACGGCTAACCTGAATGGACTACGACATAGTCTAGT
CCGCCAAGTCTAGCATATGGCGCGTGAATTCGCC*GCCAATTGGCAAGCTGTTACATAGAACTCGCGCGGATTGGCATGCCGC
CTTAAAAATTTTATTATTCTTTCTTTCCGAAATCGGATTTTGTTTTAATATTTCAAAAAAATAAAAAA
A (SEQ ID NO:15)

FIG. 6B cont'd