

pMSCVneo-GFP-miR Cntl BART19

Absent Sites	0	AarI, AbsI, AjuI, AjuI', AlfI, AlfI', ApaI, AsiSI, AvrII, BarI, BarI', BbsI, BclI, BpI, BpI', BsaBI, BsiWI, BstBI, BstXI, BstZ17I, CspCI, CspCI', DraIII, FseI, FspAI, HpaI, MauBI, MfeI, MluI, MreI, NruI, NsiI, PaeI, PfiMI, PmeI, PmlI, PshAI, PstI, PspOMI, PspXI, PstI, PstI', SanDI, SbfI, SfiI, SgrDI, SnaBI, SrfI, SmaI, XcmI, XhoI
AccI	1	3735
ArsI	1	1732
ArsI'	1	1700
BamHI	1	3728
BglII	1	1411
BplI	1	2682
BsaAI	1	3363
BspEI	1	2828
BstEII	1	1089
Clal	1	3755
EcoRI	1	2389
HincII	1	3736
NdeI	1	6888
NotI	1	2158
RsrII	1	3575
SacII	1	2164
Sall	1	3734
Scal	1	6197
SexAI	1	1217
SgrAI	1	7260

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5' TGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCATTTTGC AAGGCATGGAAAATACATAACTGAGAATAGAGAAGTTCAGATCAAGG
 100
 3' ACTTTCTGGGGTGGACATCCAAACCGTTCGATCGAATTCATTGCGGTA AACCGTTCCTGACCTTTTATGTATTGACTCTTATCTCTTCAAGTCTAGTTCC
 5' pCMV LTR

5' TTAGGAACAGAGAGACAGCAGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCG
 200
 3' AATCCTTGTCTCTCTGTCGCTTATACCCGGTTTGTCTTATAGACACCATTTCGTCAAGGACGGGGCCGAGTCCCCTGTTCTGTCTACCAGGGGTCTACGC
 5' pCMV LTR

5' GTCCCGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGACCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTC
 300
 3' CAGGGCGGGAGTCGTCAAAGATCTCTTGGTAGTCTACAAAGTCCACGGGGTTCCTGGACTTTACTGGGACACGGAATAAACTTGATTGGTTAGTCAAG
 5' pCMV LTR

5' GCTTCTCGTCTCTGTTCGCGCCTTCTGCTCCCCGAGCTCAATAAAAAGAGCCACAAACCCCTCACTCGGCGCGCAGTCTCCGATAGACTGCGTCCCC
 400
 3' CGAAGAGCGAAGACAAGCGCGGAAGACGAGGGGCTCGAGTTAATTTCTCGGGTGTGGGGAGTGAGCCGCGCGGTGAGGAGGCTATCTGACGCAGCGGG
 5' pCMV LTR

5' GGGTACCCGTATTCCCAATAAAGCCTCTTGCTGTTTGCATCCGAATCGTGGACTCGCTGATCCTTGGGAGGGTCTCCTCAGATTGATTGACTGCCACCT
 500
 3' CCCATGGGCATAAGGGTTAATTTGCGGAGAACGACAAACGTAGGCTTAGCACCTGAGCGACTAGGAACCCCTCCAGAGGAGTCTAACTAACTGACGGGTGGA
 5' pCMV LTR

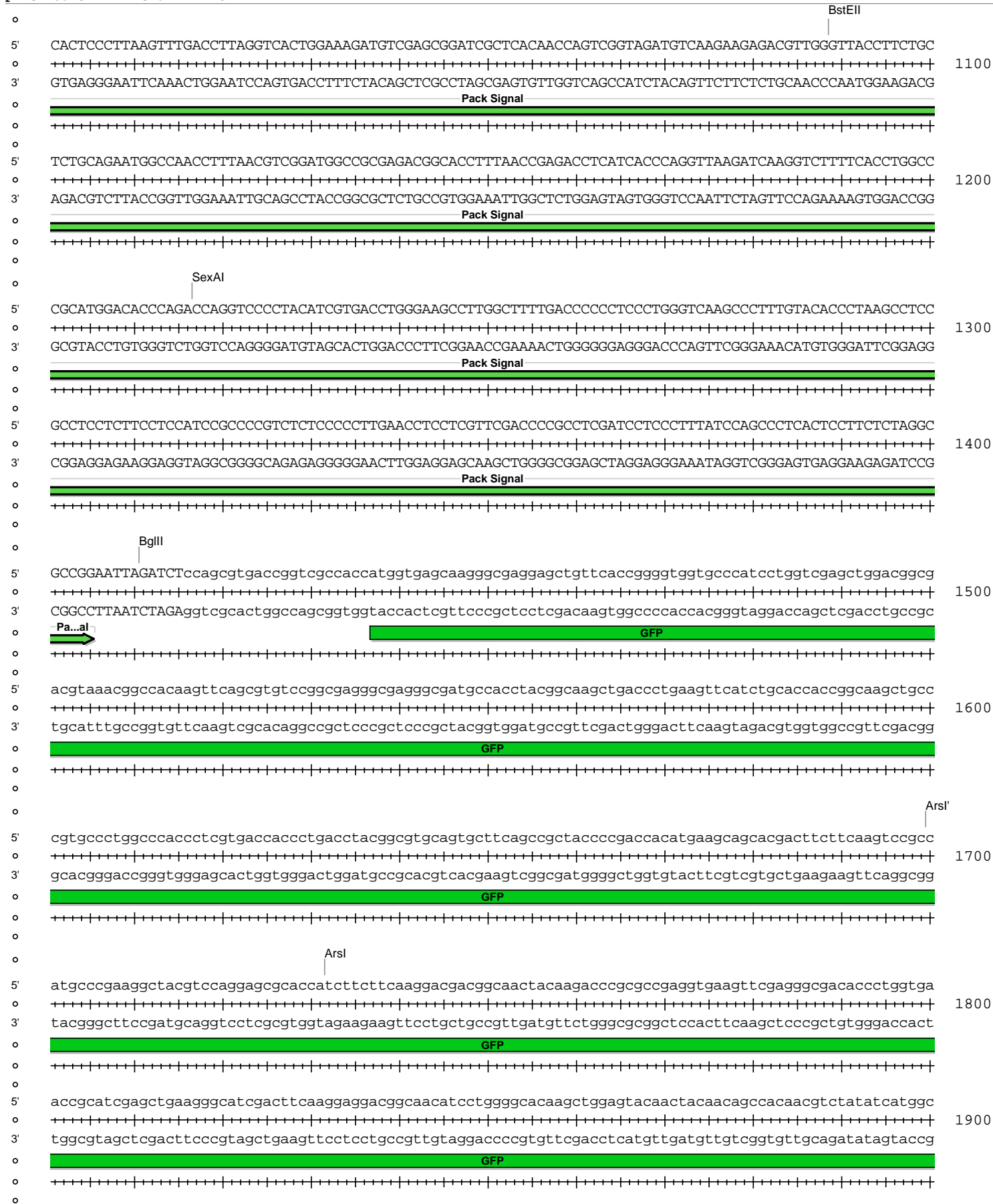
5' CGGGGTCTTTTCAATTTGGAGGTTCCACCGAGATTGGAGACCCCTGCCAGGGACCACCGACCCCCCGCGGGAGGTAAGCTGGCCAGCGGTCTGTTTCG
 600
 3' GCCCCAGAAAGTAAACCTCCAAGGTGGCTCTAAACCTCTGGGGACGGGTCCCTGGTGGCTGGGGGGCGGCCCTCCATTTCGACCGGTTCGCCAGCAAAGC
 5' pCMV LTR Pack Signal

5' TGTCTGTCTCTGTCTTTGTGCGTGTGGTGGCCGCATCTAATGTTTGCCTGCGTCTGTACTAGTTAGCTAACTAGCTCTGTATCTGGCGGACCCGTGG
 700
 3' ACAGACAGAGACAGAAACACGCACAAACACGGCCGTAGATTACAAACCGGACGCAGACATGATCAATCGATTGATCGAGACATAGACCGCTGGGCACC
 Pack Signal

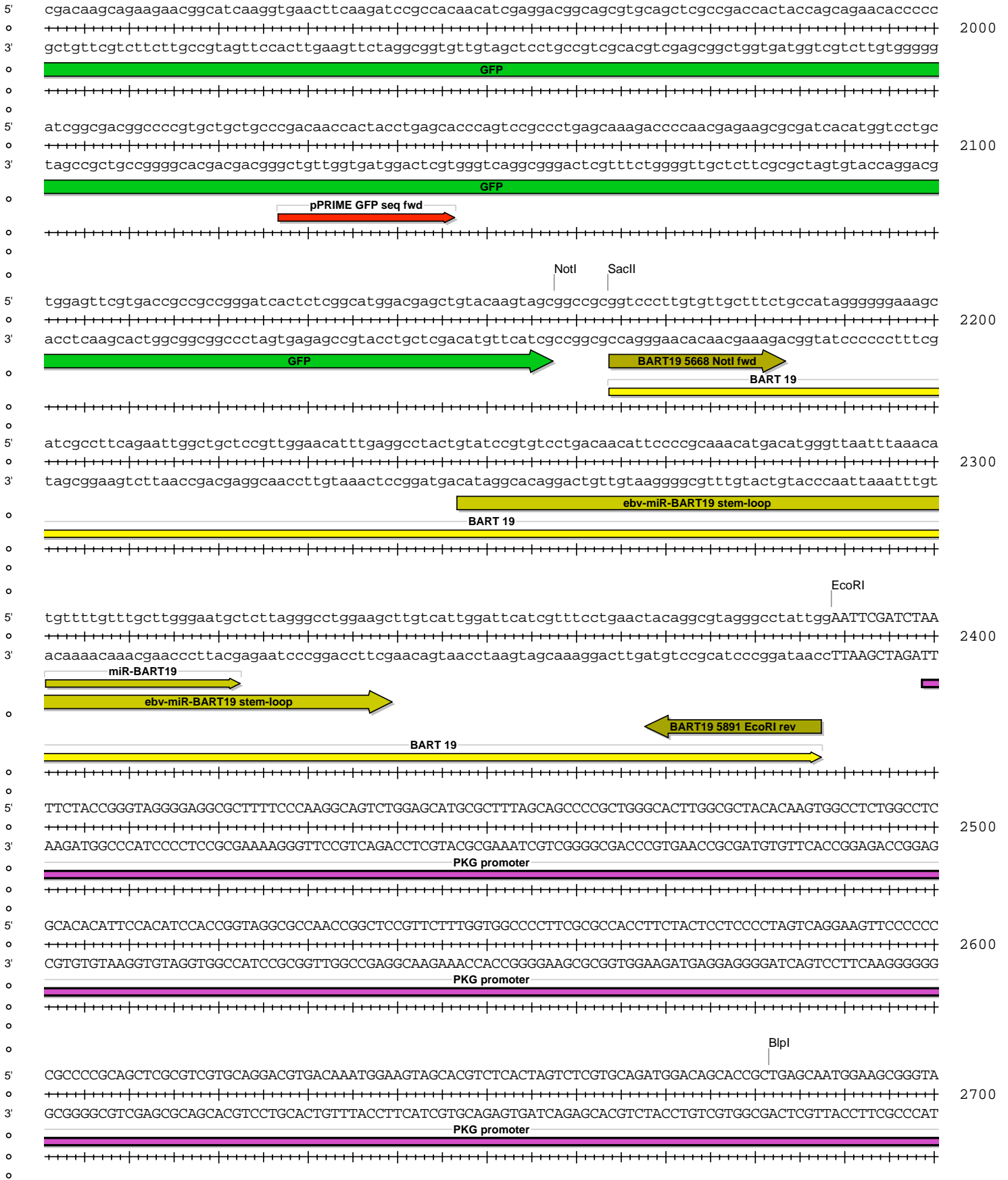
5' TGGAATGACGAGTCTGAACACCCGCGCAACCTGGGAGACGTCCCAGGGACTTTGGGGCCGTTTGTGGCCCGACCTGAGGAAGGGAGTCGATG
 800
 3' ACCTTGACTGCTCAAGACTTGTGGGCCGGCGTTGGGACCCTCTGCAGGGTCCCTGAAACCCCGGCAAAAACACCGGGCTGGACTCCTTCCTCAGCTAC
 Pack Signal

5' TGGAATCCGACCCCGTCAGGATATGTGGTCTGGTAGGAGACGAGAACC TAAAACAGTTCGCCCTCCGTCTGAATTTTGTCTTCGGTTTGAACCGAA
 900
 3' ACCTTAGGCTGGGGCAGTCTATACACCAAGACCATCCTCTGCTCTTGGATTTTGTCAAGGGCGGAGGCAGACTTAAAAACGAAAGCCAAACCTTGCTT
 Pack Signal

5' GCCGCGCTCTGTCTGCTGCAGCGCTGCAGCATCGTTCTGTGTTGTCTCTGTCTGACTGTGTTTCTGTATTTGTCTGAAAATTAGGGCCAGACTGTTAC
 1000
 3' CGGCGCGCAGAACAGACGACGTCGCGACGTCGTAGCAAGACACAACAGAGACAGACTGACACAAAGACATAAACAGACTTTTAATCCCGGTCTGACAATG
 Pack Signal



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5' GGCCTTTGGGGCAGCGCCCAATAGCAGCTTTGCTCCTTCGCTTTCTGGGCTCAGAGGCTGGGAAGGGGTGGGTCCGGGGCGGGCTCAGGGGCGGGCTCA
 3' CCGGAAACCCCGTCGCCGGTTATCGTCGAAACGAGGAAGCGAAAGACCCGAGTCTCCGACCCTTCCCACCCAGGCCCCCGCCCGAGTCCC CGCCCGAGT 2800

PKG promoter

BspEI

5' GGGCGGGGCGGGCGCCGAAGTCTCCGAGGCCCGGCATTCTGCACGCTTCAAAGCGCACGTCTGCCGCGCTGTTCTCCTTTCCTCATCTCCGGG
 3' CCCC GCCCGCCCGGGCTTCCAGGAGGCCTCCGGGCCGTAAGACGTGCGAAGTTTTCGCGTGCAGACGGCGCGACAAGAGGAGAAGGAGTAGAGGCC 2900

PKG promoter

5' CCTTTCGACCTGCAGCCAATATGGGATCGGCCATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTTCGGCTATGACTG
 3' GGAAAGCTGGACGTGCGTTATACCCTAGCCGGTAACTTGTCTTACCTAACGTGCGTCCAAGAGGCCGCGAACCACCTCTCCGATAAGCCGATACTGAC 3000

PKG ...ter

Neo Resistance

5' GGCACAACAGACAATCGGCTGCTCTGATGCCGCGTGTCCGGCTGTGTCAGCGCAGGGGCGCCCGGTTCTTTTGTCAAGACCGACTGTCCGGTGCCCTG
 3' CCGTGTGTCTGTTAGCCGACGAGACTACGGCGGCACAAGGCCGACAGTCCGCTCCCGCGGGCCAAGAAAACAGTTCTGGCTGGACAGGCCACGGGAC 3100

Neo Resistance

5' AATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGAAGGGACT
 3' TTACTTGACGCTCCTGCTCCGTCGCGCCGATAGCACCGACCGGTGCTGCCGCAAGGAACGCTGCACACGAGCTGCAACAGTGACTTCGCCCTTCCCTGA 3200

Neo Resistance

5' GGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCCGGCGCTGCA
 3' CCGACGATAACCCGCTTACGGCCCCGTCCTAGAGGACAGTAGAGTGGAACGAGGACGGCTCTTTCATAGGTAGTACCGACTACGTTACGCCGCCGACGT 3300

Neo Resistance

BsaAI

5' TACGCTTGATCCGGCTACCTGCCAATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTGATCAGGATGAT
 3' ATGCGAACTAGCCGATGGACGGTAAGCTGGTGGTTCGCTTTGTAGCGTAGCTCGTCTGTCATGAGCCTACCTTCGGCCAGAACAGCTAGTCTACTA 3400

Neo Resistance

5' CTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCTGACCCATGGCGATG
 3' GACCTGCTTCTCGTAGTCCCCGAGCGCGGTTCGGCTTGACAAGCGGTCCGAGTTCGCGCGGTACGGGCTGCCGCTCCTAGAGCAGCACTGGGTACCGCTAC 3500

Neo Resistance

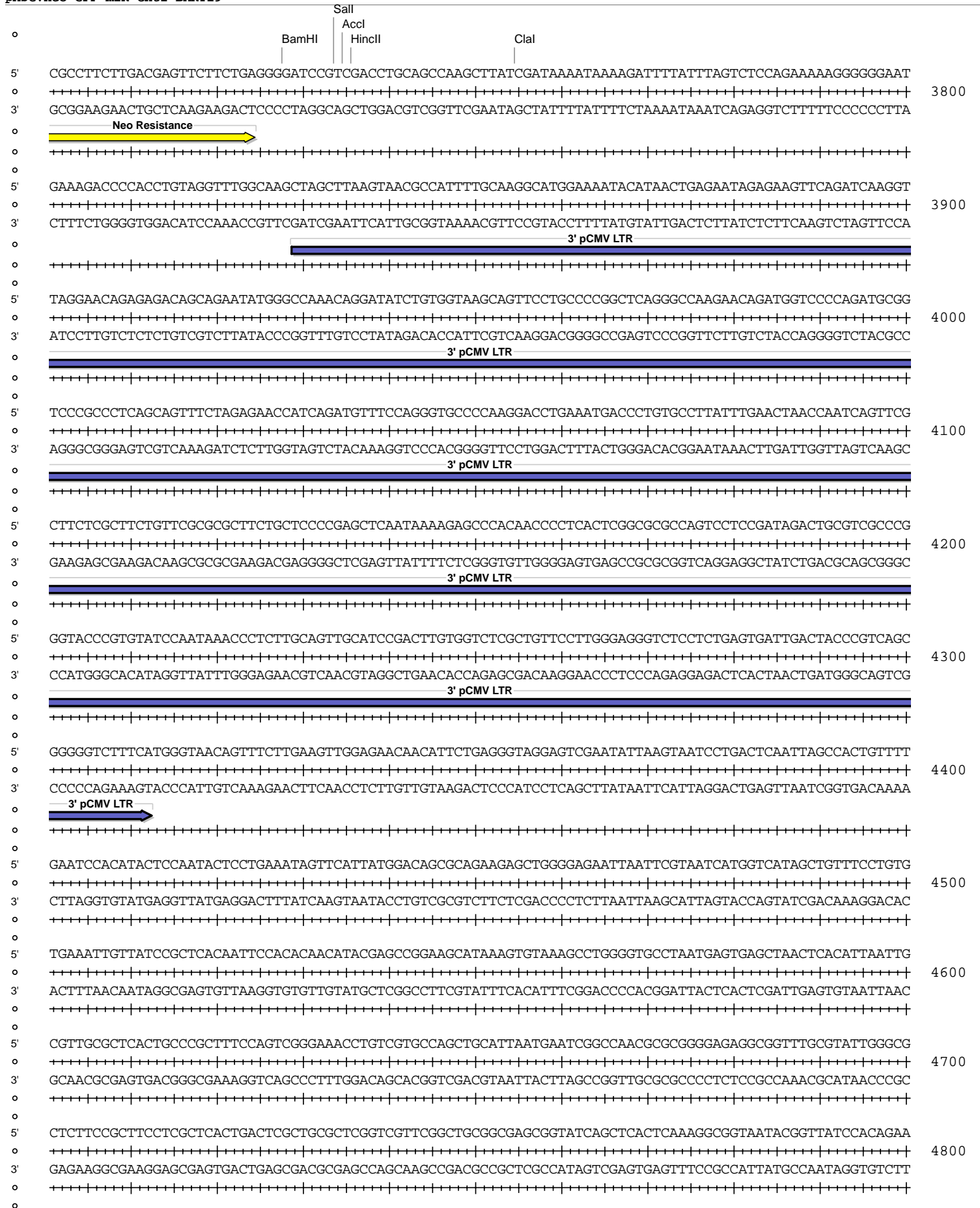
RsrII

5' CCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGATTTCATGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGC
 3' GGACGAACGGCTTATAGTACCACCTTTTACCGGCGAAAAGACCTAAGTAGCTGACACCGGCCGACCCACACCGCCTGGCGATAGTCTGTATCGCAACCG 3600

Neo Resistance

5' TACCCTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCCTCGTGTTCACGGTATCGCCGCTCCCGATTTCGCAGCGCATCGCCTTCTAT
 3' ATGGGCACTATAACGACTTCTCGAACCCCGCTTACCCGACTGGCGAAGGAGCACGAAATGCCATAGCGGCGAGGGCTAAGCGTTCGCTAGCGGAAGATA 3700

Neo Resistance



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5' TCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCC
 4900
 3' AGTCCCCTATTGCGTCCTTTCTGTACTACTCGTTTTCCGGTTCGTTTTCCGGTCTTGGCATTTTTCCGGCGCAACGACCGCCAAAAAGGTATCCGAGGCGG

5' CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGT
 5000
 3' GGGGACTGCTCGTAGTGTTTTTAGCTGCGAGTTCAGTCTCCACCCTTTGGGCTGTCTGATATTTCTATGGTCCGCAAAGGGGACCTTCGAGGGAGCA

5' GCGCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTC
 5100
 3' CGCGAGAGGACAAGGCTGGGACGGCGAATGGCCTATGGACAGGCGAAAGAGGGAAGCCCTTCGCACC CGCAAAGAGTATCGAGTGCACATCCATAGAG

5' AGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCGACCGCTGCGCCTTATCCGTAACATCGTCTTGAGTCCA
 5200
 3' TCAAGCCACATCCAGCAAGCGAGGTTCCGACCCGACACACGTGCTTGGGGGCAAGTCGGGCTGGCGACCGGAATAGGCCATTGATAGCAGAACTCAGGT

5' ACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTG
 5300
 3' TGGGCCATTCTGTGCTGAATAGCGGTGACCGTCTCGGTGACCATGTCTAATCGTCTCGTCCATACATCCGCCACGATGTCTCAAGAACTTCACCAC

5' GCCTAACTACGGCTACACTAGAGGACAGTATTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAA
 5400
 3' CGGATTGATCCGATGTGATCTTCTGTCTATAAACCATAGACGCGAGACGACTTCGGTCAATGGAAGCCTTTTTCTCAACCATCGAGAAGTAGGCCGTTT

5' CAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGT
 5500
 3' GTTTGGTGGCGACCATCGCCACCAAAAAACAAACGTTTCGTCTAATGCGCGTCTTTTTTCTTAGAGTCTTCTAGGAAACTAGAAAAGATGCCCCA

5' CTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCAAGAGATTATCAAAAAGGATCTTACCTAGATCCTTTTAAATTAATAATGAAGTTT
 5600
 3' GACTGCGAGTCACCTTGCTTTTGGAGTGCAATCCCTAAAACAGTACTCTAATAGTTTTTCTAGAAAGTGGATCTAGGAAAATTAATTTTACTTCAAA

5' TAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAAGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCC
 5700
 3' ATTTAGTTAGATTTTCATATATACTCATTGAACCAGACTGTCAATGGTTACGAATTAGTCACTCCGTTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGG
 Amp res

5' ATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGTGCAATGATACCGCGAGACCCACGCTCACCGG
 5800
 3' TATCAACGGACTGAGGGGAGCAGCATCTATTGATGCTATGCCCTCCCGAATGGTAGACCGGGTACGACGTTACTATGGCGCTCTGGGTGCGAGTGGCC
 Amp res

5' CTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCGG
 5900
 3' GAGGTCTAAATAGTCTTATTGGTTCGGTTCGGCCTTCCGGCTCGCGTTCACCAGGACGTTGAAATAGGCGGAGGTAGGTGAGATAATTAACAACGGC
 Amp res

5' GGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCACAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTACGCTCGTCTTGGTATGGCTTCA
 6000
 3' CCTTCGATCTCATTTCATCAAGCGGTCAATTATCAAACGCTTGAACAACGGTAACGATGTCCGTAGCACACAGTGCAGCAGCAAAACCATACCGAAGT
 Amp res

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5' TTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCTCCGATCGTTGTCAGAAGTA
 6100
 3' AAGTCGAGGCCAAGGGTTGCTAGTTCGGCTCAATGTACTAGGGGGTACAACACGTTTTTTCGCCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCAT
 Amp res

5' AGTTGGCCGAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTC
 6200
 3' TCAACCGGCGTCACAATAGTGAGTACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACTCATGAG
 Amp res

5' AACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTG
 6300
 3' TTGGTTCAAGACTCTTATCACATACGCGCTGGCTCAACGAGAACGGGCGCAGTTATGCCCTATTATGGCGCGGTGTATCGTCTTGAATTTTCAC
 Amp res

5' CTCATCATTGGAAAACGTTCTTCGGGGCGAAAACCTCTCAAGGATCTTACCCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTT
 6400
 3' GAGTAGTAACCTTTTGAAGAAGCCCGCTTTTGAAGTTCCTAGAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAA
 Amp res

5' CAGCATCTTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACT
 6500
 3' GTCGTAGAAAATGAAAGTGGTCGAAAGACCCACTCGTTTTTGTCTTCCGTTTTTACGGCGTTTTTCCCTTATCCCGCTGTGCCTTTACAACCTTATGA
 Amp res

5' CATACTCTTCTTTTCAATATATTGAAGCATTATCAGGGTTATTGTCTCATGAGCGGATACATAATTGAATGTATTTAGAAAAATAACAAATAGGG
 6600
 3' GTATGAGAAGGAAAAAGTTATAATAACTTCGTAATAAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTATTGTTTATCCC
 -A...s

5' GTTCCGCGCACATTTCCCGAAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGGCGTATCACGAGGCCCTTTC
 6700
 3' CAAGGCGCGTGTAAAGGGGCTTTTACGGTGGACTGCAGATTCCTTTGGTAATAATAGTACTGTAATTGGATATTTTATCCGCATAGTGCTCCGGGAAAG

5' GTCTCGCGCTTTTCGGTGATGACGGTGAACCTCTGACACATGCAGCTCCCGGAGACGGTACAGCTTGTCTGTAAGCGGATGCCGGGAGCAGACAAGC
 6800
 3' CAGAGCGCGCAAAGCCACTACTGCCACTTTTGGAGACTGTGTACGTGAGGGCCTCTGCCAGTGTGCAACAGACATTCCGCTACGGCCCTCGTCTGTTCG
 Ndel

5' CCGTCAGGGCGCGTCAGCGGGTGTGGCGGGTGTGGGGCTGGCTTAACATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATCGGGTGTGAA
 6900
 3' GGCAGTCCCGCGCAGTCGCCACAACCGCCACAGCCCGACCGAATTGATACGCGTAGTCTCGTCTAACATGACTCTCACGTGGTATACGCCACTT

5' ATACCGCACAGATGCGTAAGGAGAAAATACCGCATCAGCGCCATTTCGCCATTTCAGGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGC
 7000
 3' TATGGCGTGTCTACGCATTCTCTTTTATGGCGTAGTCCGCGGTAAGCGGTAAGTCCGACCGTTGACAACCTTCCCGCTAGCCACGCCCGGAGAAGCG

5' TATTACGCCAGCTGGCGAAAGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTAACGACGCGGCAAGG
 7100
 3' ATAATGCGGTGACCGCTTTCCCTTACACGACGTTCCGCTAATTCAACCATTCGCGTCCAAAAGGGTCAGTGCTGCAACATTTGCTGCCGCGTTC

