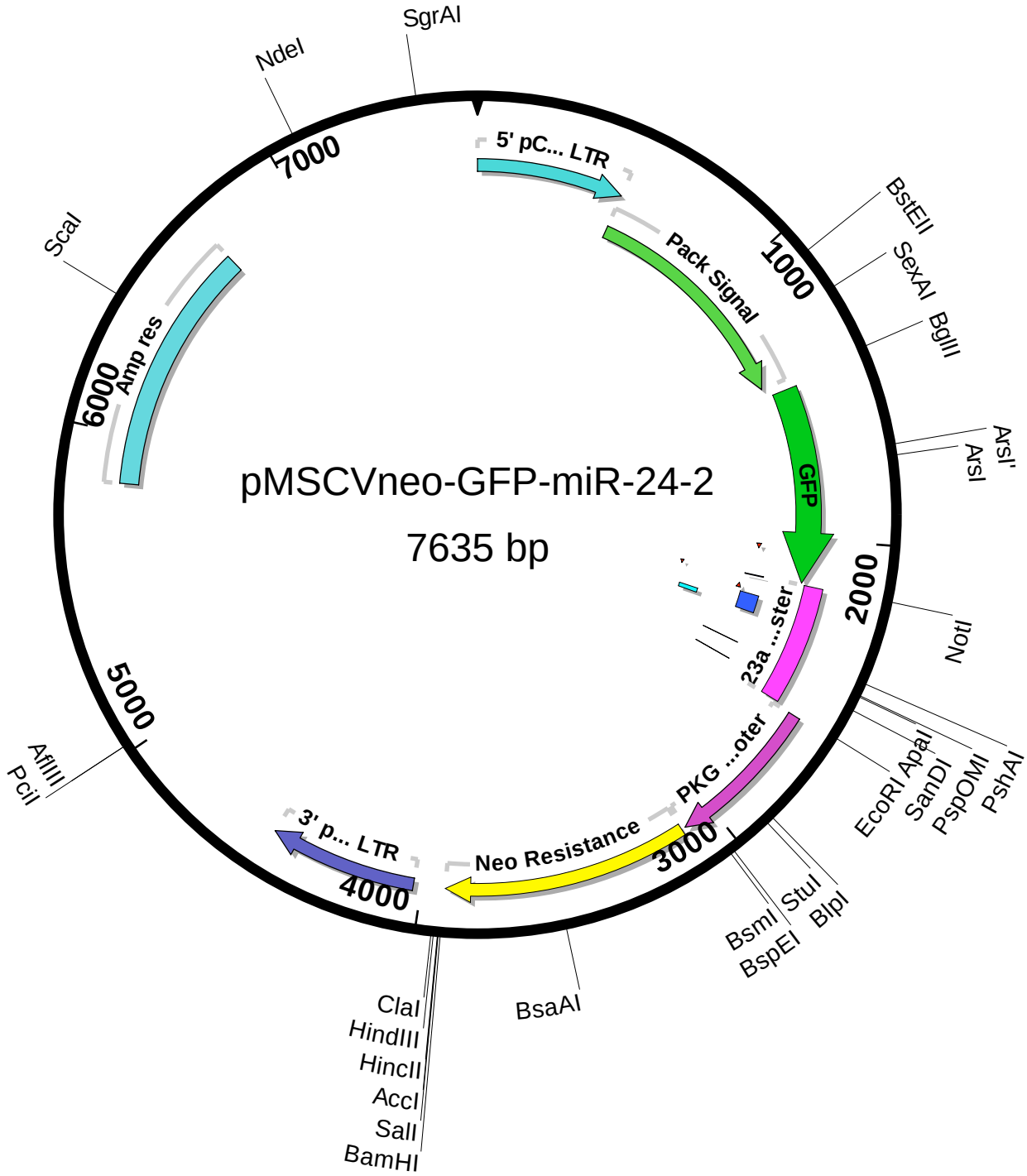
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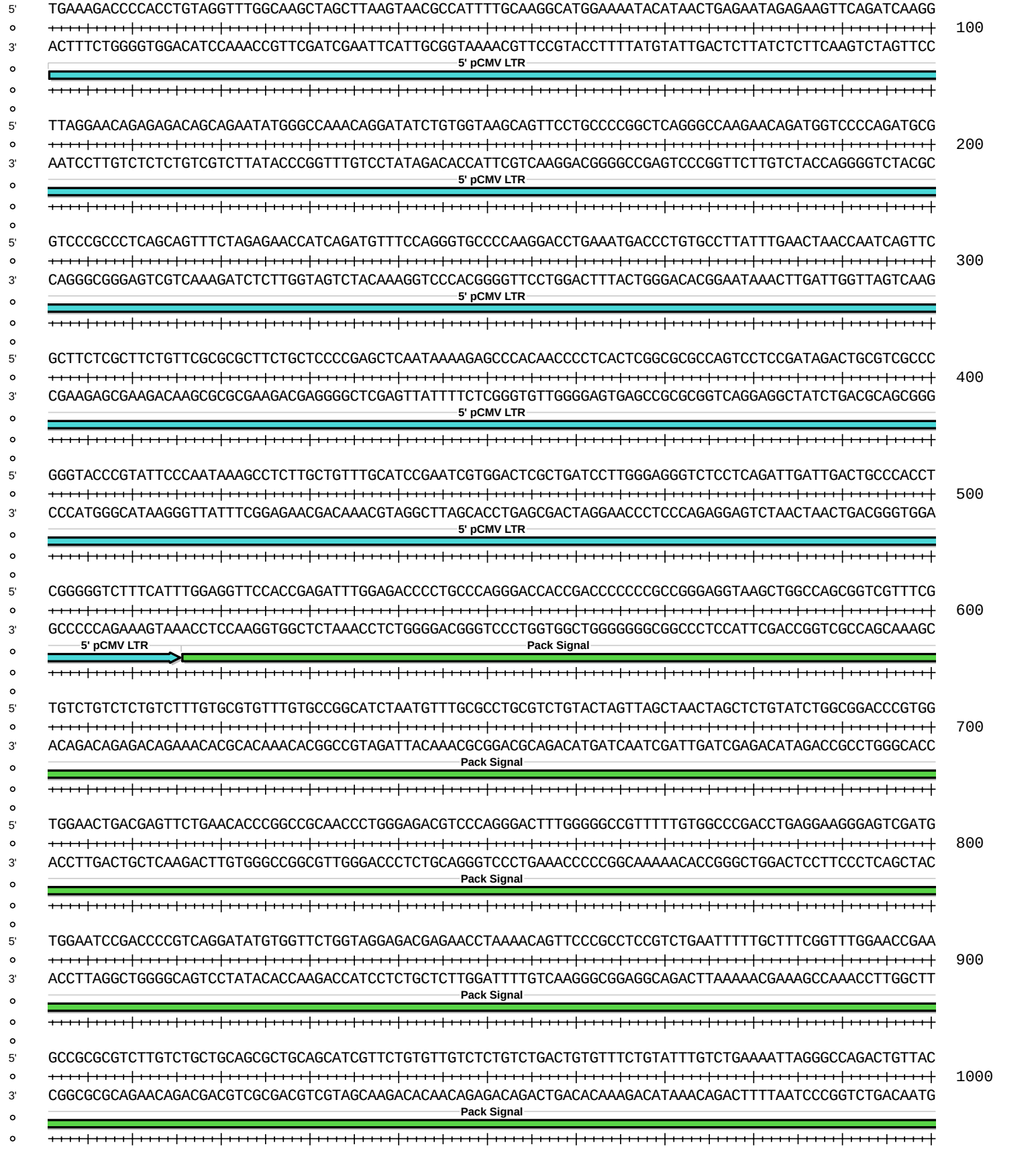
1000
2000
3000
4000
5000
6000
7000
5' pC... LTR
Pack Signal
GFP
23a ...ster
PKG ...oter
Neo Resistance
3' p... LTR
Amp res
SgrAI
NdeI
ScaI
BstEII
SexAI
BglII
ArsI'
ArsI
NotI
EcoRI
ApaI
SanDI
PspOMI
PshAI
BlpI
StuI
BsmI
BspEI
BsaAI
ClaI
HindIII
HincII
AccI
SalI
BamHI
PciI
AflIII

Absent Sites	0	AarI,AbsI,AjuI,AjuI',AlfI,AlfI',AsiSI,AvrII,BarI,BarI',BbsI,BclI,BplI,BplI',BsaBI,BsiWI,BstBI,BstXI,BstZ17I,CspCI,CspCI',DraIII, FseI,FspAI,HpaI,MauBI,MfeI,MluI,MreI,NruI,NsiI,PacI,PflMI,PmeI,PmlI,PsiI,PspXI,PsrI,PsrI',SacII,SbfI,SfiI,SgrDI,SnaBI,SrfI, SwaI,XcmI,XhoI
AccI	1	3933 (7635)
AflIII	1	5022 (7635)
ApaI	1	2451 (7635)
ArsI	1	1737 (7635)
ArsI'	1	1705 (7635)
BamHI	1	3926 (7635)
BglII	1	1411 (7635)
BlpI	1	2880 (7635)
BsaAI	1	3561 (7635)
BsmI	1	3038 (7635)
BspEI	1	3026 (7635)
BstEII	1	1089 (7635)
ClaI	1	3953 (7635)
EcoRI	1	2587 (7635)
HincII	1	3934 (7635)
HindIII	1	3946 (7635)
NdeI	1	7086 (7635)
NotI	1	2163 (7635)
PciI	1	5022 (7635)
PshAI	1	2410 (7635)
PspOMI	1	2447 (7635)
SalI	1	3932 (7635)
SanDI	1	2494 (7635)
ScaI	1	6395 (7635)
SexAI	1	1217 (7635)
SgrAI	1	7458 (7635)
StuI	1	2901 (7635)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5' pCMV LTR
5' TTAGGAACAGAGAGACAGCAGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCG
200
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5' pCMV LTR
5' GCTTCTCGCTTCTGTTCGCGCGCTTCTGCTCCCCGAGCTCAATAAAAGAGCCCACAACCCCTCACTCGGCGCGCCAGTCCTCCGATAGACTGCGTCGCCC
400
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5' pCMV LTR
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500
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5' pCMV LTR
5' CGGGGGTCTTTCATTTGGAGGTTCCACCGAGATTTGGAGACCCCTGCCCAGGGACCACCGACCCCCCCGCCGGGAGGTAAGCTGGCCAGCGGTCGTTTCG
600
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Pack Signal
5' TGTCTGTCTCTGTCTTTGTGCGTGTTTGTGCCGGCATCTAATGTTTGCGCCTGCGTCTGTACTAGTTAGCTAACTAGCTCTGTATCTGGCGGACCCGTGG
700
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Pack Signal
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800
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Pack Signal
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3' ACCTTAGGCTGGGGCAGTCCTATACACCAAGACCATCCTCTGCTCTTGGATTTTGTCAAGGGCGGAGGCAGACTTAAAAACGAAAGCCAAACCTTGGCTT
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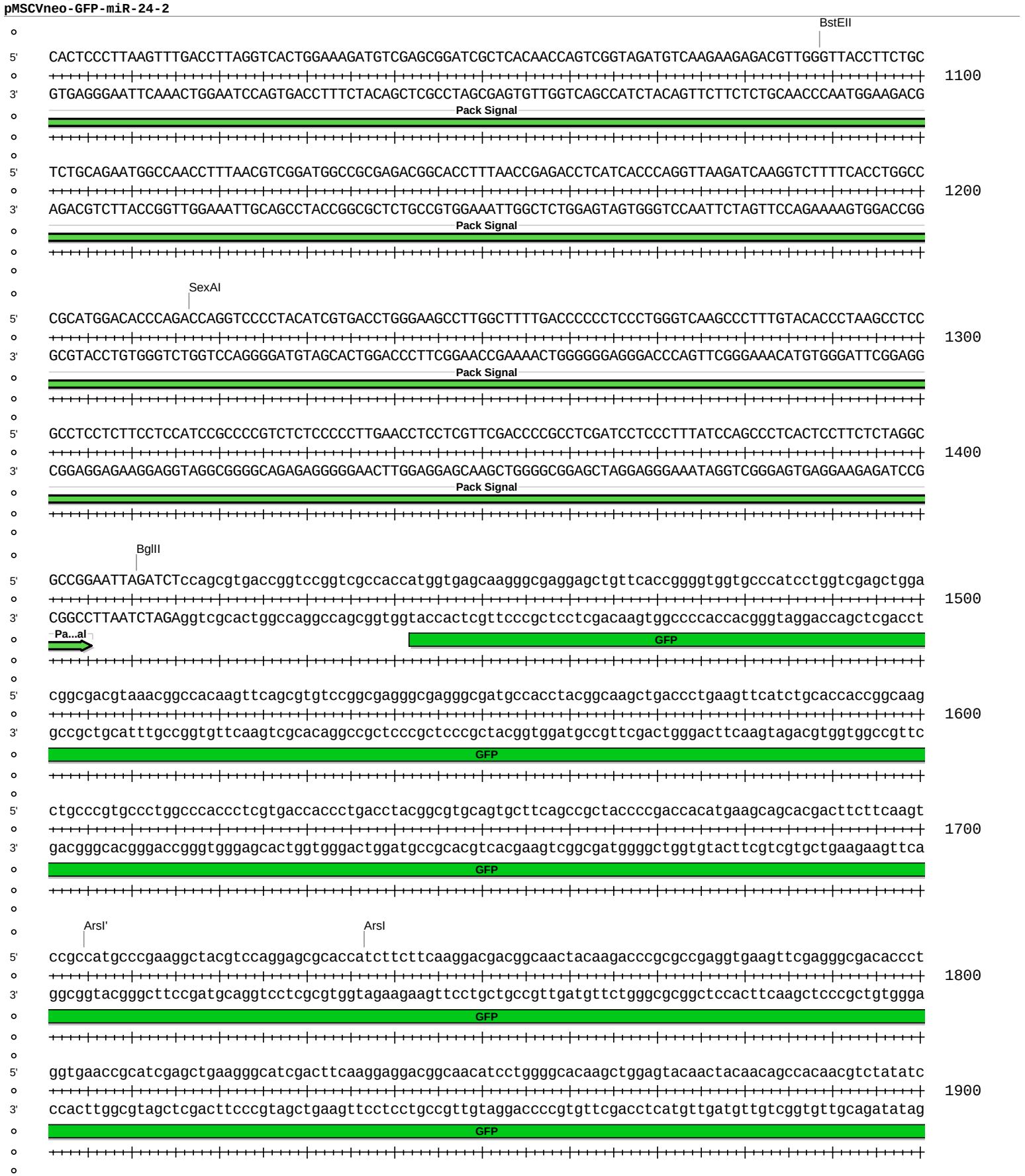
Pack Signal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Pack Signal
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1200
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SexAI
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1400
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BglII
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Pa...al
GFP
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GFP
ArsI'
ArsI
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GFP
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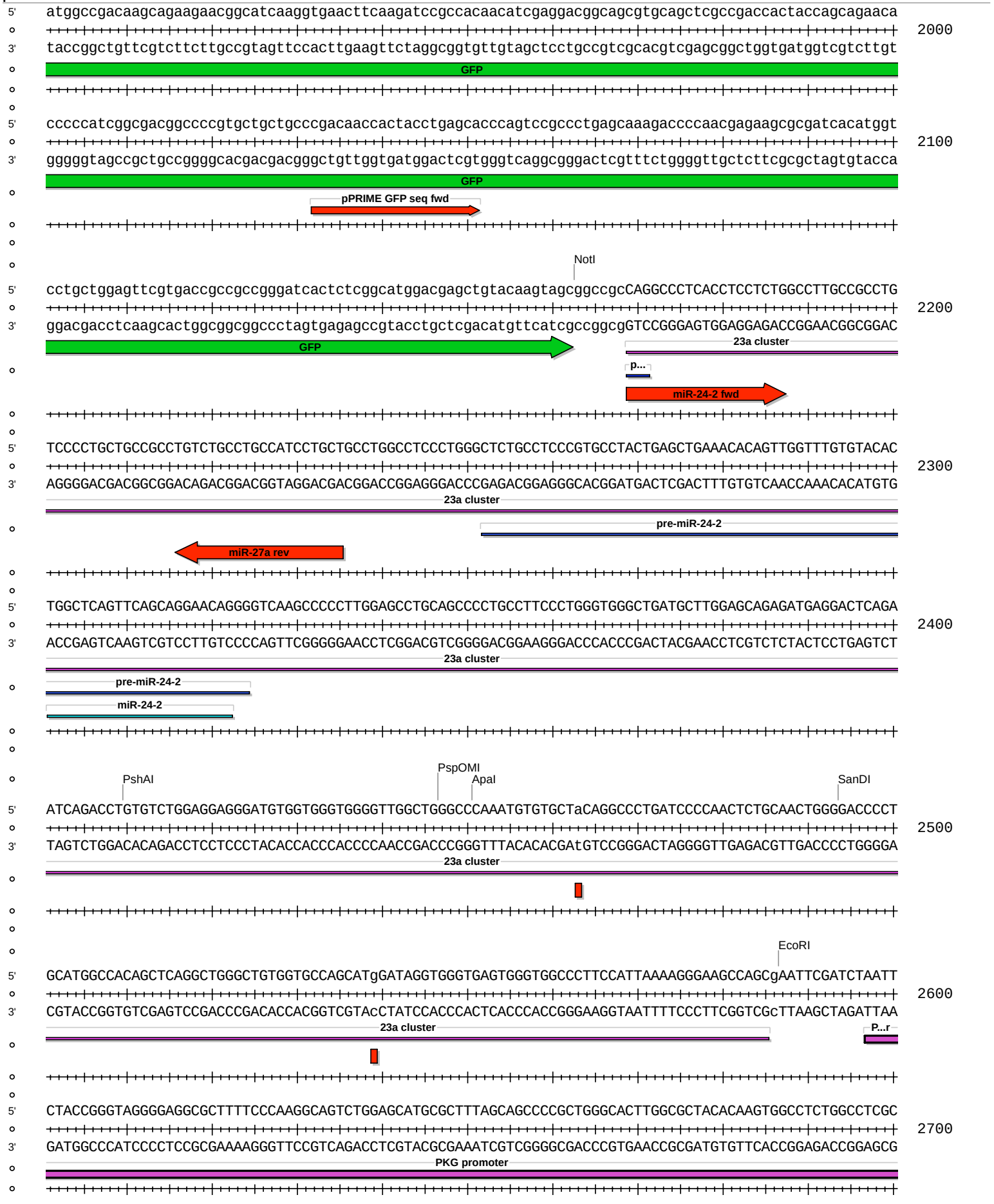
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GFP
pPRIME GFP seq fwd
NotI
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2200
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GFP
23a cluster
p...
miR-24-2 fwd
5' TCCCCTGCTGCCGCCTGTCTGCCTGCCATCCTGCTGCCTGGCCTCCCTGGGCTCTGCCTCCCGTGCCTACTGAGCTGAAACACAGTTGGTTTGTGTACAC
2300
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23a cluster
pre-miR-24-2
miR-27a rev
5' TGGCTCAGTTCAGCAGGAACAGGGGTCAAGCCCCCTTGGAGCCTGCAGCCCCTGCCTTCCCTGGGTGGGCTGATGCTTGGAGCAGAGATGAGGACTCAGA
2400
3' ACCGAGTCAAGTCGTCCTTGTCCCCAGTTCGGGGGAACCTCGGACGTCGGGGACGGAAGGGACCCACCCGACTACGAACCTCGTCTCTACTCCTGAGTCT
23a cluster
pre-miR-24-2
miR-24-2
PspOMI
PshAI
ApaI
SanDI
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23a cluster
EcoRI
5' GCATGGCCACAGCTCAGGCTGGGCTGTGGTGCCAGCATgGATAGGTGGGTGAGTGGGTGGCCCTTCCATTAAAAGGGAAGCCAGCgAATTCGATCTAATT
2600
3' CGTACCGGTGTCGAGTCCGACCCGACACCACGGTCGTAcCTATCCACCCACTCACCCACCGGGAAGGTAATTTTCCCTTCGGTCGcTTAAGCTAGATTAA
23a cluster
P...r
5' CTACCGGGTAGGGGAGGCGCTTTTCCCAAGGCAGTCTGGAGCATGCGCTTTAGCAGCCCCGCTGGGCACTTGGCGCTACACAAGTGGCCTCTGGCCTCGC
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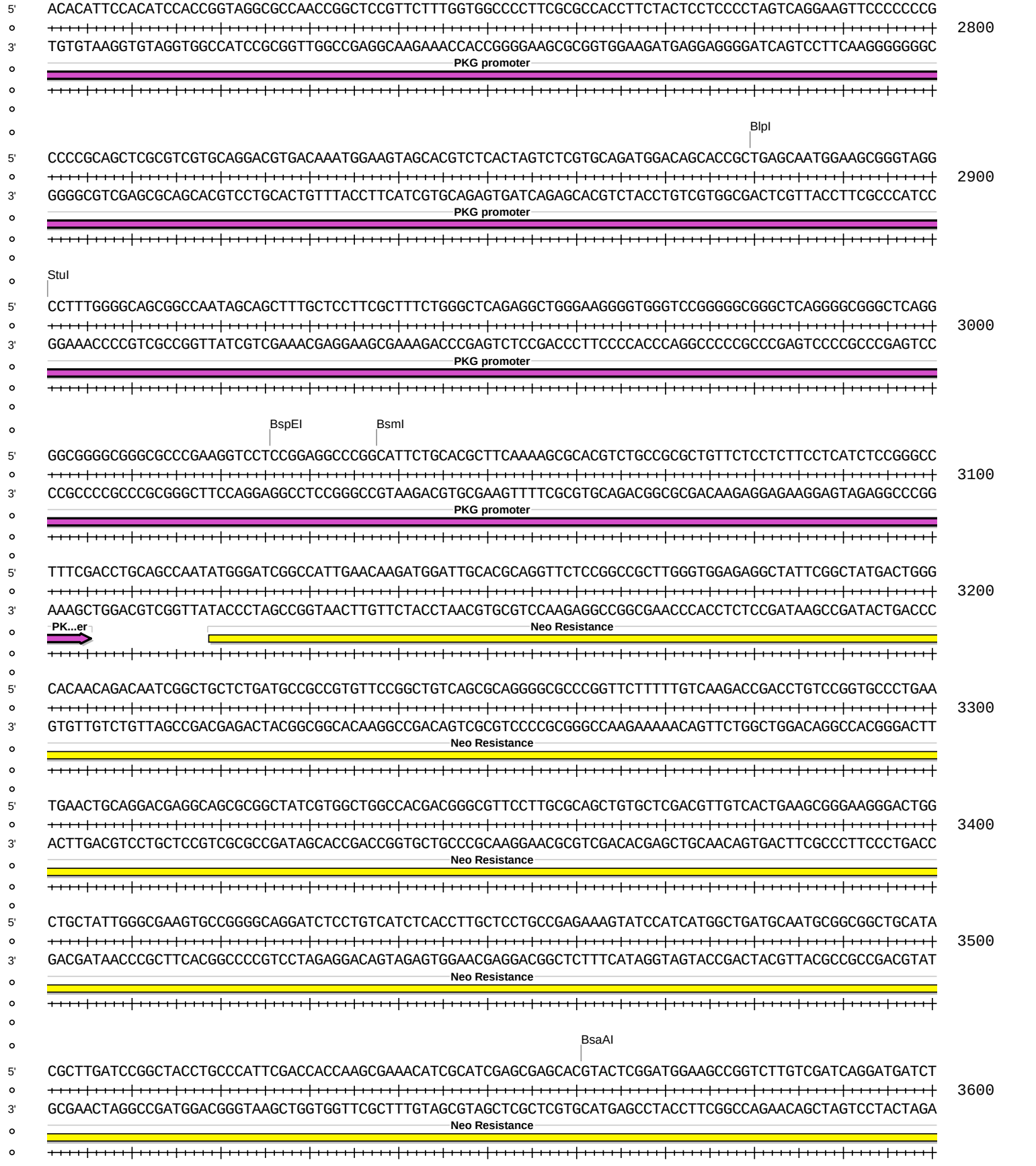
PKG promoter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PKG promoter
BlpI
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2900
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StuI
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3000
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PKG promoter
BspEI
BsmI
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3100
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3200
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PK...er
Neo Resistance
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3300
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3400
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Neo Resistance
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3500
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Neo Resistance
BsaAI
5' CGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCT
3600
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Neo Resistance


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3700
3' CCTGCTTCTCGTAGTCCCCGAGCGCGGTCGGCTTGACAAGCGGTCCGAGTTCCGCGCGTACGGGCTGCCGCTCCTAGAGCAGCACTGGGTACCGCTACGG
Neo Resistance
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3800
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Neo Resistance
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3900
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Neo Resistance
SalI
AccI
BamHI
HincII
HindIII
ClaI
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4000
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Neo Resistance
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3' pCMV LTR
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3' pCMV LTR
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4600
3' CCCAGAAAGTACCCATTGTCAAAGAACTTCAACCTCTTGTTGTAAGACTCCCATCCTCAGCTTATAATTCATTAGGACTGAGTTAATCGGTGACAAAACT
3' pCMV LTR

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3'  TAGGTGTATGAGGTTATGAGGACTTTATCAAGTAATACCTGTCGCGTCTTCTCGACCCCTCTTAATTAAGCATTAGTACCAGTATCGACAAAGGACACAC
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
5'  AAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCG
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o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
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o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  4900
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o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
5'  CTTCCGCTTCCTCGCTCACTGACTCGCTGCGCTCGGTCGTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAATC
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  5000
3'  GAAGGCGAAGGAGCGAGTGACTGAGCGACGCGAGCCAGCAAGCCGACGCCGCTCGCCATAGTCGAGTGAGTTTCCGCCATTATGCCAATAGGTGTCTTAG
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
                          PciI
                          AflIII
o                         |
5'  AGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCC
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o
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o
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o
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o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
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o
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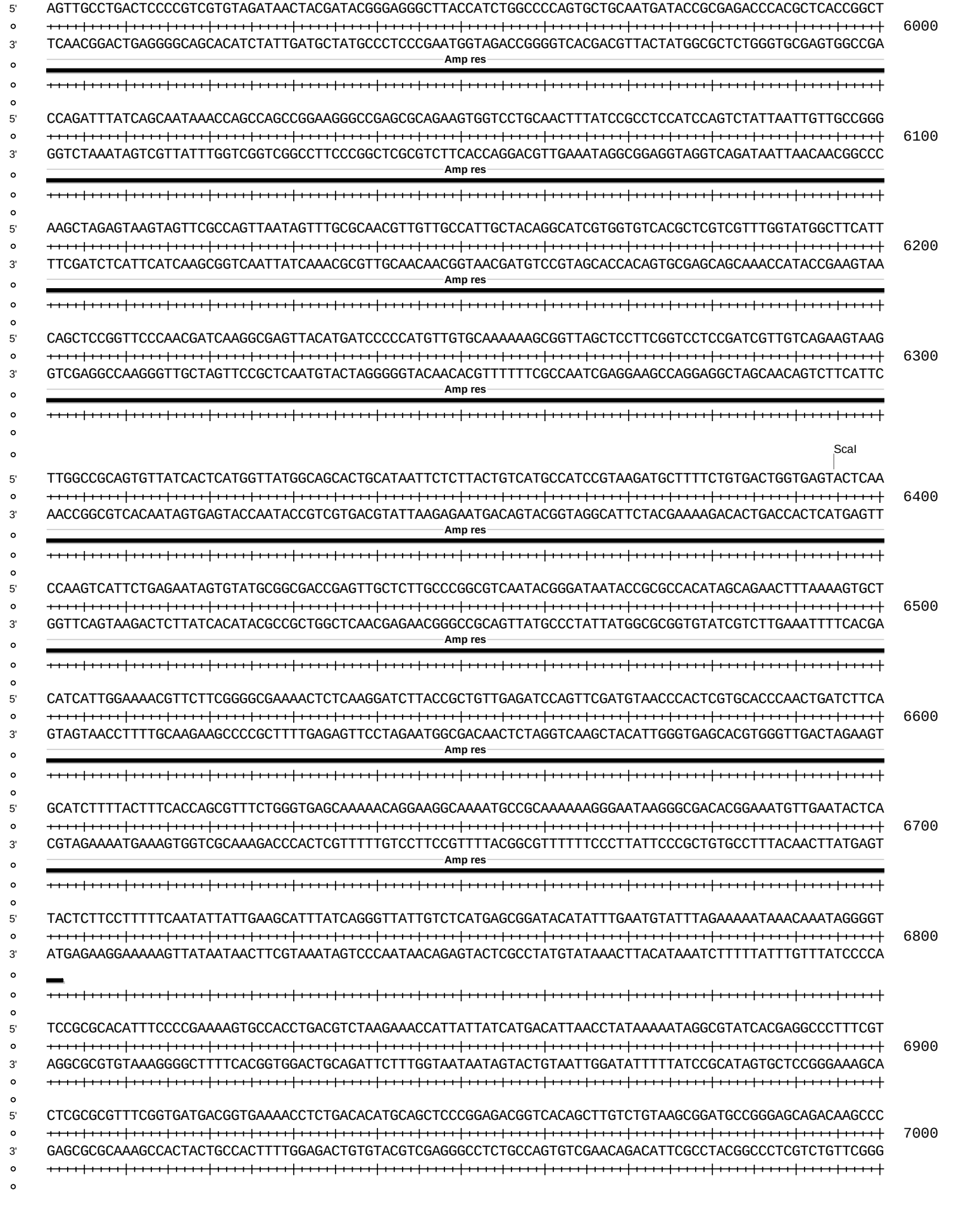
o
5'  AACCACCGCTGGTAGCGGTGGTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCT
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  5700
3'  TTGGTGGCGACCATCGCCACCAAAAAAACAAACGTTCGTCGTCTAATGCGCGTCTTTTTTTCCTAGAGTTCTTCTAGGAAACTAGAAAAGATGCCCCAGA
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
5'  GACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAAAAATGAAGTTTTA
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  5800
3'  CTGCGAGTCACCTTGCTTTTGAGTGCAATTCCCTAAAACCAGTACTCTAATAGTTTTTCCTAGAAGTGGATCTAGGAAAATTTAATTTTTACTTCAAAAT
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
5'  AATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTCGTTCATCCAT
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  5900
3'  TTAGTTAGATTTCATATATACTCATTTGAACCAGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGGTA
o                                                  Amp res
o   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
o
```


5' AGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGGCT
3' TCAACGGACTGAGGGGCAGCACATCTATTGATGCTATGCCCTCCCGAATGGTAGACCGGGGTCACGACGTTACTATGGCGCTCTGGGTGCGAGTGGCCGA
6000
Amp res
5' CCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCCGGG
3' GGTCTAAATAGTCGTTATTTGGTCGGTCGGCCTTCCCGGCTCGCGTCTTCACCAGGACGTTGAAATAGGCGGAGGTAGGTCAGATAATTAACAACGGCCC
6100
Amp res
5' AAGCTAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTCGTTTGGTATGGCTTCATT
3' TTCGATCTCATTCATCAAGCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCCGTAGCACCACAGTGCGAGCAGCAAACCATACCGAAGTAA
6200
Amp res
5' CAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTCAGAAGTAAG
3' GTCGAGGCCAAGGGTTGCTAGTTCCGCTCAATGTACTAGGGGGTACAACACGTTTTTTCGCCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTC
6300
Amp res
ScaI
5' TTGGCCGCAGTGTTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAA
3' AACCGGCGTCACAATAGTGAGTACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACTCATGAGTT
6400
Amp res
5' CCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCT
3' GGTTCAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGGGCCGCAGTTATGCCCTATTATGGCGCGGTGTATCGTCTTGAAATTTTCACGA
6500
Amp res
5' CATCATTGGAAAACGTTCTTCGGGGCGAAAACTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCA
3' GTAGTAACCTTTTGCAAGAAGCCCCGCTTTTGAGAGTTCCTAGAATGGCGACAACTCTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAGT
6600
Amp res
5' GCATCTTTTACTTTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCA
3' CGTAGAAAATGAAAGTGGTCGCAAAGACCCACTCGTTTTTGTCCTTCCGTTTTACGGCGTTTTTTCCCTTATTCCCGCTGTGCCTTTACAACTTATGAGT
6700
Amp res
5' TACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGT
3' ATGAGAAGGAAAAAGTTATAATAACTTCGTAAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTTATTTGTTTATCCCCA
6800
5' TCCGCGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGGCGTATCACGAGGCCCTTTCGT
3' AGGCGCGTGTAAAGGGGCTTTTCACGGTGGACTGCAGATTCTTTGGTAATAATAGTACTGTAATTGGATATTTTTATCCGCATAGTGCTCCGGGAAAGCA
6900
5' CTCGCGCGTTTCGGTGATGACGGTGAAAACCTCTGACACATGCAGCTCCCGGAGACGGTCACAGCTTGTCTGTAAGCGGATGCCGGGAGCAGACAAGCCC
3' GAGCGCGCAAAGCCACTACTGCCACTTTTGGAGACTGTGTACGTCGAGGGCCTCTGCCAGTGTCGAACAGACATTCGCCTACGGCCCTCGTCTGTTCGGG
7000

NdeI

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5'  GTCAGGGCGCGTCAGCGGGTGTTGGCGGGTGTCGGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGGTGTGAAAT
                                                                                                      7100
3'  CAGTCCCGCGCAGTCGCCCACAACCGCCCACAGCCCCGACCGAATTGATACGCCGTAGTCTCGTCTAACATGACTCTCACGTGGTATACGCCACACTTTA

5'  ACCGCACAGATGCGTAAGGAGAAAATACCGCATCAGGCGCCATTCGCCATTCAGGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTA
                                                                                                      7200
3'  TGGCGTGTCTACGCATTCCTCTTTTATGGCGTAGTCCGCGGTAAGCGGTAAGTCCGACGCGTTGACAACCCTTCCCGCTAGCCACGCCCGGAGAAGCGAT

5'  TTACGCCAGCTGGCGAAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCCAGTCACGACGTTGTAAAACGACGGCGCAAGGAA
                                                                                                      7300
3'  AATGCGGTCGACCGCTTTCCCCCTACACGACGTTCCGCTAATTCAACCCATTGCGGTCCCAAAAGGGTCAGTGCTGCAACATTTTGCTGCCGCGTTCCTT

5'  TGGTGCATGCAAGGAGATGGCGCCCAACAGTCCCCCGGCCACGGGGCCTGCCACCATACCCACGCCGAAACAAGCGCTCATGAGCCCGAAGTGGCGAGCC
                                                                                                      7400
3'  ACCACGTACGTTCCTCTACCGCGGGTTGTCAGGGGGCCGGTGCCCCGGACGGTGGTATGGGTGCGGCTTTGTTCGCGAGTACTCGGGCTTCACCGCTCGG
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SgrAI

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5'  CGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCCGGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGCGATTAG
                                                                                                      7500
3'  GCTAGAAGGGGTAGCCACTACAGCCGCTATATCCGCGGTCGTTGGCGTGGACACCGCGGCCACTACGGCCGGTGCTACGCAGGCCGCATCTCCGCTAATC

5'  TCCAATTTGTTAAAGACAGGATATCAGTGGTCCAGGCTCTAGTTTTGACTCAACAATATCACCAGCTGAAGCCTATAGAGTACGAGCCATAGATAAAATA
                                                                                                      7600
3'  AGGTTAAACAATTTCTGTCCTATAGTCACCAGGTCCGAGATCAAAACTGAGTTGTTATAGTGGTCGACTTCGGATATCTCATGCTCGGTATCTATTTTAT

5'  AAAGATTTTATTTAGTCTCCAGAAAAAGGGGGGAA
                                                                                                      7635
3'  TTTCTAAAATAAATCAGAGGTCTTTTTCCCCCCTT
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