

## pMSCVneo-GFP-miR-23a

Absent Sites	0	AarI,Abst,AjuI,AjuI',AlfI,AlfI',ApaI,AsiSI,AvrII,BarI,BarI',BbsI,BpII,BpII',BsaBI,BsiWI,BstBI,BstXI,BstZ17I,CspCI,CspCI',DraIII,FseI,FspAI,HpaI,MauBI,MfeI,MluI,MreI,NruI,NsiI,Pacl,PmeI,PmlI,PshAI,PsiI,PspOMI,PspXI,Psrl,Psrl',SanDI,SbfI,SfiI,SgrDI,SnaBI,SrfI,Swal,XcmI,XhoI
AccI	1	3820 (7522)
AflIII	1	4909 (7522)
Arsl	1	1737 (7522)
Arsl'	1	1705 (7522)
BamHI	1	3813 (7522)
BclI	1	2204 (7522)
BglIII	1	1411 (7522)
BipI	1	2767 (7522)
BsaAI	1	3448 (7522)
BsmI	1	2925 (7522)
BspEI	1	2913 (7522)
BstEII	1	1089 (7522)
Clal	1	3840 (7522)
EcoRI	1	2474 (7522)
HincII	1	3821 (7522)
HindIII	1	3833 (7522)
NotI	1	2163 (7522)
PciI	1	4909 (7522)
PfIMI	1	2301 (7522)
SacII	1	2169 (7522)
Sall	1	3819 (7522)
Scal	1	6282 (7522)
SexAI	1	1217 (7522)
SgrAI	1	7345 (7522)
StuI	1	2788 (7522)

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5' TGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCATTTTGAAGGCATGGAAAATACATAACTGAGAATAGAGAAGTTCAGATCAAGG  
 100  
 3' ACTTCTGGGGTGGACATCCAAACCGTTCGATCGAATTCATTGCGGTAAACGTTCCGTACCTTTTATGTATTGACTCTTATCTCTTCAAGTCTAGTTCC  
 5' pCMV LTR

5' TTAGGAACAGAGACAGCAGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCG  
 200  
 3' AATCCTTGTCTCTCTGTCGCTTATACCCGGTTTGTCTTATAGACACCATTTCGTCAAGGACGGGGCCGAGTCCCGGTTCTTGTCTACCAGGGGTCTACGC  
 5' pCMV LTR

5' GTCCCGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGACCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTC  
 300  
 3' CAGGGCGGGAGTCGTCAAAGATCTCTTGGTAGTCTACAAAGTCCACGGGGTTCCTGGACTTTACTGGGACACGGAATAAACTTGATTGGTTAGTCAAG  
 5' pCMV LTR

5' GCTTCTCGTCTCTGTTCGCGCCTTCTGCTCCCCGAGCTCAATAAAAAGAGCCACAAACCCCTCACTCGCGCGCCAGTCTCCGATAGACTGCGTCGCCC  
 400  
 3' CGAAGAGCGAAGACAAGCGCGGAAGACGAGGGGCTCGAGTTAATTTCTCGGGTGTGGGGAGTGAGCCGCGCGGTGAGGAGGCTATCTGACGCAGCGGG  
 5' pCMV LTR

5' GGGTACCCGTATTCCCAATAAAGCCTCTTGCTGTTTGCATCCGAATCGTGGACTCGCTGATCCTTGGGAGGGTCTCCTCAGATTGATTGACTGCCACCT  
 500  
 3' CCCATGGGCATAAGGGTTAATTTGCGGAGAACGACAAACGTAGGCTTAGCACCTGAGCGACTAGGAACCCCTCCAGAGGAGTCTAACTAACTGACGGGTGGA  
 5' pCMV LTR

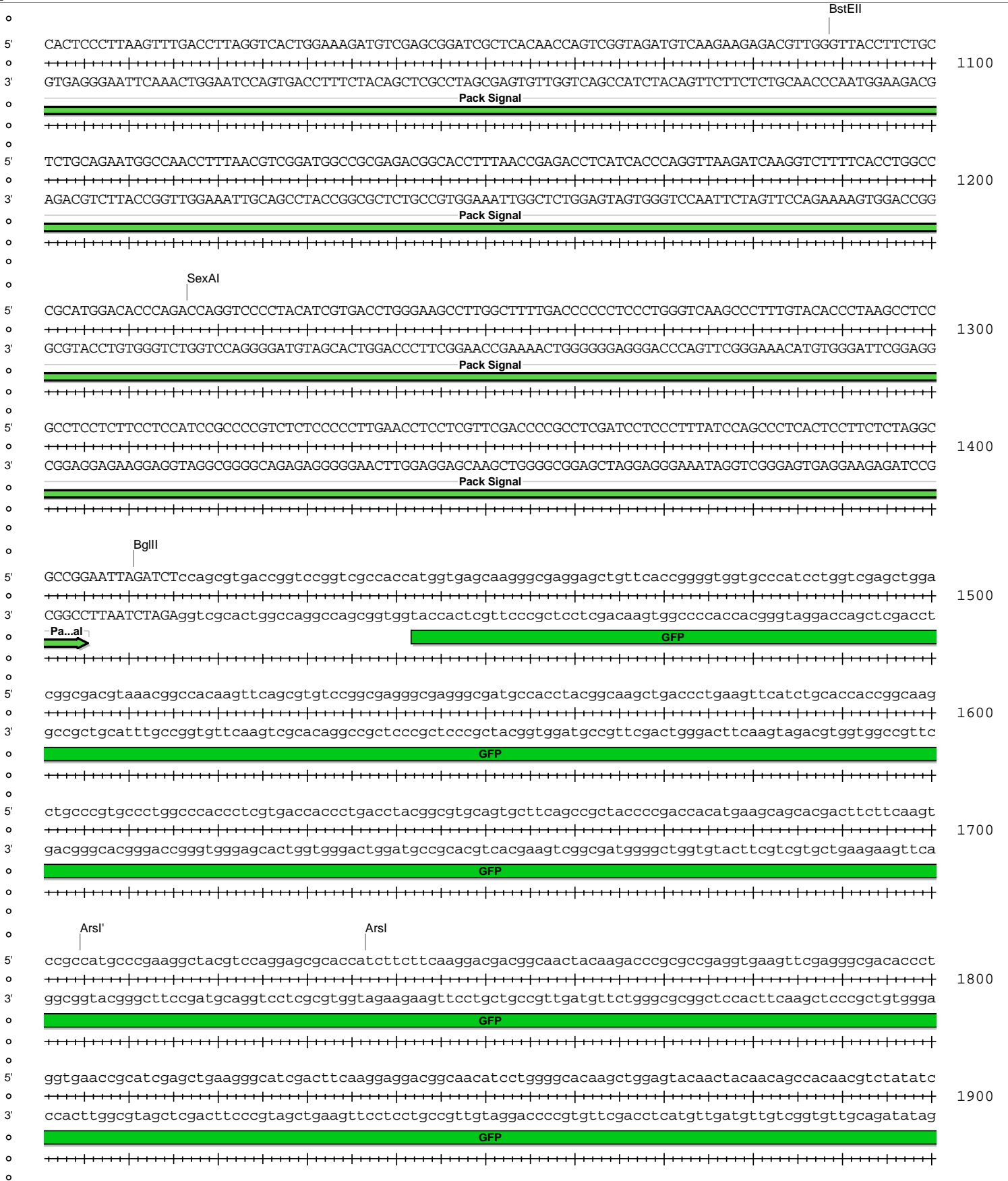
5' CGGGGTCTTTTCAATTTGGAGGTTCCACCGAGATTGGAGACCCCTGCCAGGGACCACCGACCCCCCGCGGGAGGTAAGCTGGCCAGCGGTCTGTTTCG  
 600  
 3' GCCCCAGAAAGTAAACCTCCAAGGTGGCTCTAAACCTCTGGGGACGGGTCCCTGGTGGCTGGGGGGCGGCCCTCCATTTCGACCGGTTCGCCAGCAAAGC  
 5' pCMV LTR Pack Signal

5' TGTCTGTCTCTGTCTTTGTGCGTGTGTGTCGGCATCTAATGTTTGCCTGCGTCTGTACTAGTTAGCTAACTAGCTCTGTATCTGGCGGACCCGTGG  
 700  
 3' ACAGACAGAGACAGAAACACGCACAAACACGGCCGTAGATTACAAACCGCGGACGCAGACATGATCAATCGATTGATCGAGACATAGACCGCTGGGCACC  
 Pack Signal

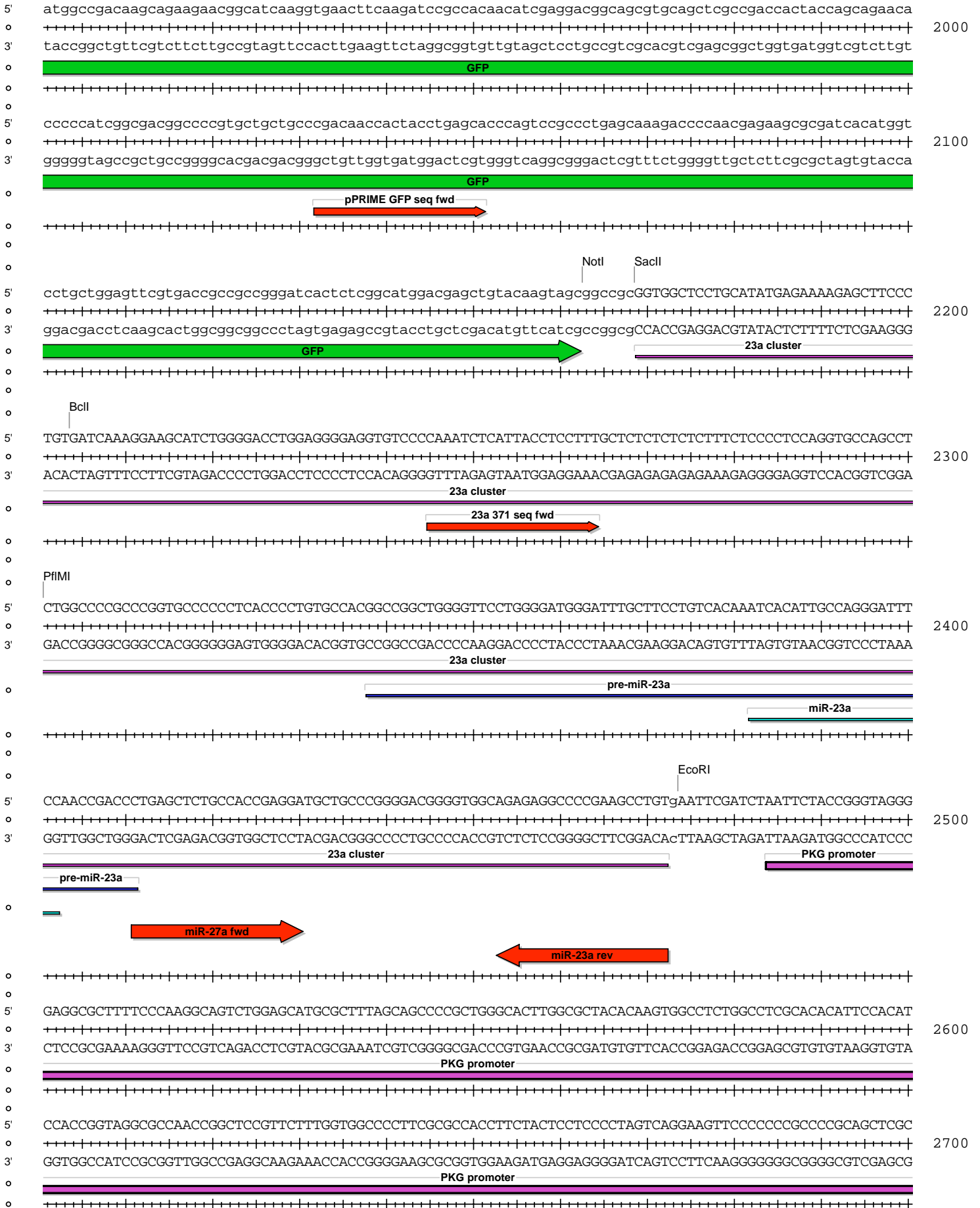
5' TGGAATGACGAGTTCGAACACCCGCGCAACCTGGGAGACGTCCCAGGGACTTTGGGGCCGTTTGTGGCCCGACCTGAGGAAGGGAGTCGATG  
 800  
 3' ACCTTGACTGCTCAAGACTTGTGGGCCGGCTTGGGACCCTCTGCAGGGTCCCTGAAACCCCGGCAAAAACACCGGGCTGGACTCCTTCCTCAGCTAC  
 Pack Signal

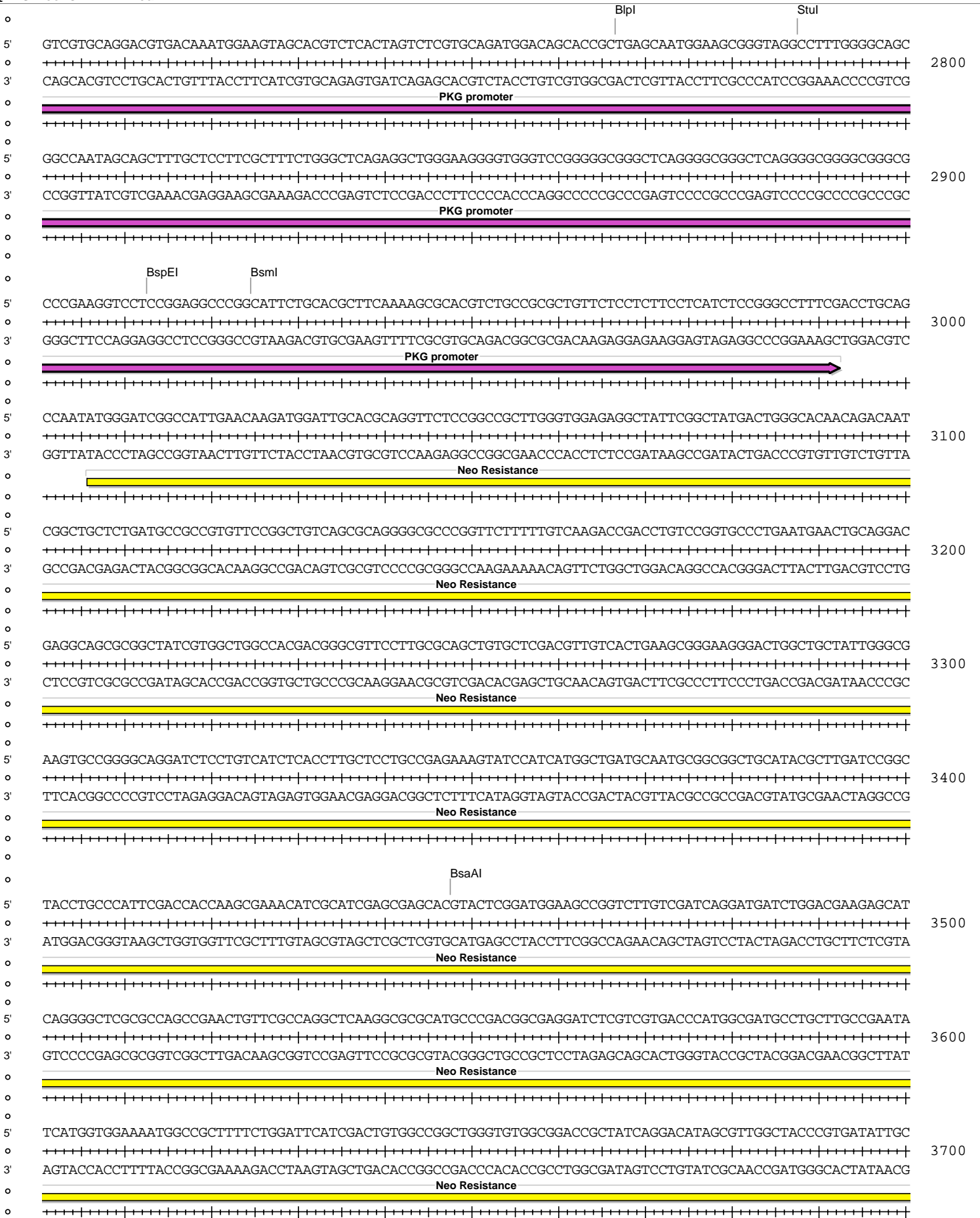
5' TGGAATCCGACCCCGTCAAGATATGTGGTCTGGTAGGAGACGAGAACCATAAACAGTTCGCCCTCCGTCTGAATTTTGTCTTTCGGTTTGAACCGAA  
 900  
 3' ACCTTAGGCTGGGGCAGTCTTATACACCAAGACCATCCTCTGCTCTTGGATTTTGTCAAGGGCGGAGGCAGACTTAAAAACGAAAGCCAAACCTTGGCTT  
 Pack Signal

5' GCCGCGCTCTGTCTGCTGCAGCGCTGCAGCATCGTTCGTGTTGTCTCTGTCTGACTGTGTTTCTGTATTTGTCTGAAAATTAGGGCCAGACTGTTAC  
 1000  
 3' CGGCGCGCAGAACAGACGACGTCGCGACGTCGTAGCAAGACACAACAGAGACAGACTGACACAAAGACATAAACAGACTTTTAATCCCGGTCTGACAATG  
 Pack Signal

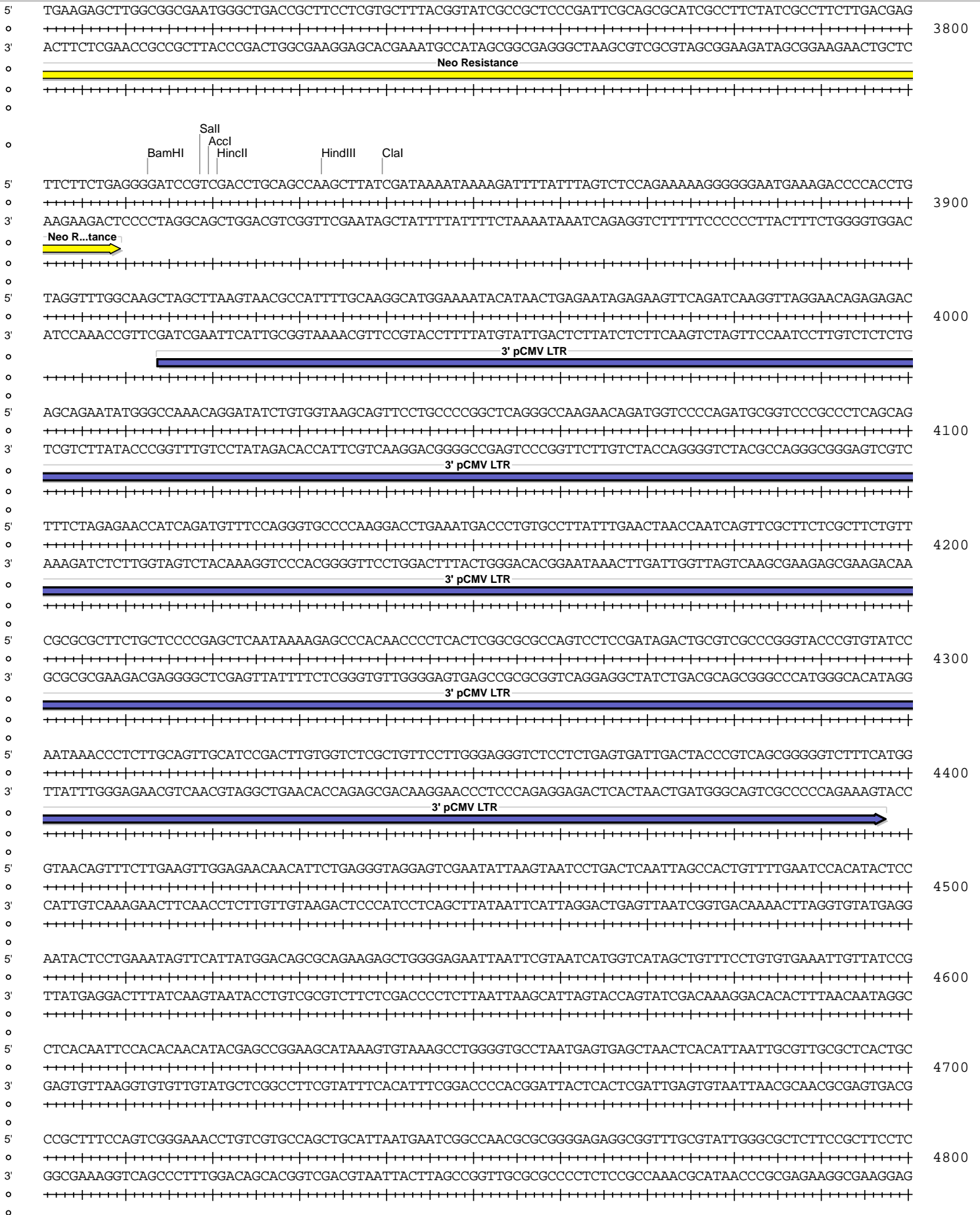


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5' GCTCACTGACTCGCTCGCTCGGTCGTTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCA 4900  
 3' CGAGTGACTGAGCGACGCGAGCCAGCAAGCCGACGCCGCTCGCCATAGTCGAGTGAGTTTCCGCCATTATGCCAATAGGTGTCTTAGTCCCCTATTGCGT

Pcil  
 AfIII

5' GGAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGCCTGGCGTTTTCATAGGCTCCGCCCCCTGACGAGCATC 5000  
 3' CCTTCTTGTACACTCGTTTTCCGGTCGTTTTCCGGTCTTGGCATTTTTCCGGCGCAACGACCGCAAAAAGGTATCCGAGGCGGGGGACTGCTCGTAG

5' ACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAAGCTCCCTCGTGCCTCTCCTGTTCC 5100  
 3' TGTTTTTAGCTGCGAGTTCAGTCTCCACCGCTTTGGGCTGTCTGATATTTCTATGGTCCGCAAAGGGGACCTTCGAGGGAGCACGCGAGAGGACAAGG

5' GACCCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTC 5200  
 3' CTGGGACGGCGAATGGCCTATGGACAGGCGGAAAGAGGGAAGCCCTTCGCACCGCGAAAGAGTATCGAGTGCACATCCATAGAGTCAAGCCACATCCAG

5' GTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACG 5300  
 3' CAAGCGAGGTTTCGACCGACACAGTGTCTGGGGGCAAGTGGGCTGGCGACGCGGAATAGGCCATTGATAGCAGAACTCAGGTTGGGCCATTCTGTGC

5' ACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTA 5400  
 3' TGAATAGCGGTGACCGTCGTCGGTGACCATTGTCTAATCGTCTCGCTCCATACATCCGCCACGATGCTCAAGAACTTACCACCGGATTGATGCCGAT

5' CACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGA AAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGT 5500  
 3' GTGATCTTCTGTGCATAAACCATAGACGCGAGACGACTTCGGTCAATGGAAGCCTTTTTCTCAACCATCGAGAACTAGGCCGTTTTGTTGGTGGCGACCA

5' AGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGA 5600  
 3' TCGCCACCAAAAAACAAACGTTTCGTCGTCTAATGCGCGTCTTTTTTTCCTAGAGTCTTCTTAGGAACTAGAAAAGATGCCCCAGACTGCGAGTCACT

5' ACGAAAATCAGTTAAGGGATTTGGTTCATGAGATTATCAAAAAGGATCTCACCTAGATCCTTTTAAATTAAAAATGAAGTTTTAAATCAATCTAAAG 5700  
 3' TGCTTTGAGTGCAATTCCCTAAAACAGTACTCTAATAGTTTTTCTAGAAAGTGGATCTAGGAAAATTTAATTTTACTTCAAAAATTTAGTTAGATTTT

5' TATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAGTTGCCTGACTC 5800  
 3' ATATATACTCATTGAACCAGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGGTATCAACGGACTGAG

Amp res

5' CCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGTGCAATGATACCGCGAGACCCAGCTCACCGGCTCCAGATTTATCAG 5900  
 3' GGGCAGCACATCTATTGATGTATGCCCTCCCGAATGGTAGACGGGGTACGACGTTACTATGGCGCTCTGGGTGCGAGTGGCCGAGGTCTAAATAGTC

Amp res

5' CAATAAACCCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCTCCATCCAGTCTATTAATTGTTGCCGGAAGCTAGAGTAAG 6000  
 3' GTTATTTGGTTCGGTTCGCCTTCCCGCTCGCGTCTTACCAGGACGTTGAAATAGCGGAGGTAGGTGAGATAATTAACACGGCCCTTCGATCTCATTC

Amp res



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5' TAGTTCGCCAGTTAATAGTTTGCGCAACGTTGTGTCATGCTACAGGCATCGTGGTGTACAGCTCGTCGTTTGGTATGGCTTCATTCAGCTCCGGTTCC  
 6100  
 3' ATCAAGCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCGGTAGCACCACAGTGCAGAGCAGCAAACCATACCGAAGTAAGTCGAGGCCAAGG  
 Amp res

5' CAACGATCAAGGCGAGTTACATGATCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCTCCGATCGTTGTGTCAGAAAGTAAGTTGGCCGAGTGT  
 6200  
 3' GTTGCTAGTTCCGCTCAATGTACTAGGGGTACAACACGTTTTTTTCGCCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTCAACCGGCGTCACA  
 Amp res

5' TATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACTGTATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATCTCG  
 6300  
 3' ATAGTGAGTACCAATACCGTCTGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACTCATGAGTTGGTTTCAGTAAGAC  
 Amp res

5' AGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTCTCATCATTGGAAAA  
 6400  
 3' TCTTATCACATACCGCGCTGGCTCAACGAGAACGGGCCAGTTATGCCCTATTATGGCGCGGTGTATCGTCTTGAAATTTTCAGGAGTAGTAACCTTTT  
 Amp res

5' CGTCTTCGGGGCGAAAACTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTTACTT  
 6500  
 3' GCAAGAAGCCCGCTTTTGAGAGTTCCTAGAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAGTCGTAGAAAAATGAA  
 Amp res

5' TCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTCTTCCTTTT  
 6600  
 3' AGTGGTCGCAAGACCCACTCGTTTTTGTCTTCCGTTTTTACGGCGTTTTTTCCTTATTCCCGCTGTGCCTTTACAACCTATGAGTATGAGAAGGAAAA  
 Amp res

5' TCAATATTATGAAGCATTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAACAAATAGGGGTTCCGCGCACATTT  
 6700  
 3' AGTTATAATAACTTCGTAAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAAATCTTTTATTTGTTTATCCCAAGGCGCGTGTAAA  
 Amp res

5' CCCCAGAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAAATAGGCGTATCACGAGGCCCTTTTCGTCTCGCGGTTTCG  
 6800  
 3' GGGGCTTTTACGGTGGACTGCAGATTTCTTGGTAATAATAGTACTGTAATTTGGATATTTTATCCGCATAGTCTCCGGGAAAGCAGAGCGCGCAAGC  
 Amp res

5' GTGATGACGGTGAAAACCTCTGACACATGCAGCTCCCGGAGACGGTCCACAGCTTGTCTGTAAGCGGATGCCGGGAGCAGACAAGCCCGTCAGGGCGCGTC  
 6900  
 3' CACTACTGCCACTTTTGGAGACTGTGTACGTGAGGGCTCTGCCAGTGTGAAACAGACATTTCGCCTACGGCCCTCGTCTGTTCCGGCAGTCCCGCGCAG  
 Amp res

5' AGCGGGTGTGGCGGGTGTGGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGACTGAGAGTGACCATATGCGGTGTGAAATACCGCACAGATGC  
 7000  
 3' TCGCCACAACCGCCACAGCCCGACCGAATTGATACGCOGTAGTCTCGTCTAACATGACTCTCACGTGGTATACGCCACACTTTATGGCGTGTCTACG  
 Amp res

5' GTAAGGAGAAAATACCGCATCAGGCGCCATTTCGCCATTACGGTCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTGG  
 7100  
 3' CATTCTCTTTATGGCGTAGTCCGCGTAAGCGGTAAGTCCGACGCGTTGACAACCTTCCCGCTAGCCACGCCGGAAGCGATAATGCGGTGCGACC  
 Amp res

Scal

