

Absent Sites	0	AarI, AbsI, Accl, Ajul, Ajul', ApaI, AsiSI, AvrII, BamHI, BarI, BarI', BbsI, BclI, BplI, BplI', BsaAI, BsaBI, BstBI, BstXI, BstZ17I, CspCI, CspCI', FseI, FspAI, HincII, HpaI, MauBI, MfeI, MluI, MreI, NruI, PacI, PflMI, PmeI, PmlI, PshAI, PstI, PspOMI, PspXI, PstI, PstI', Sall, SandI, SbfI, SfiI, SgrDI, SnaBI, SrfI, SmaI, XcmI, XhoI
AfIII	1	4704
ArsI	1	1732
ArsI'	1	1700
BglIII	1	1411
BplI	1	2734
BsiWI	1	3037
BsmI	1	2892
BspMI	1	2970
BtgZI	1	1559
ClaI	1	3635
DraIII	1	3552
EcoRI	1	2451
HindIII	1	2972
NcoI	1	1436
NdeI	1	6768
NotI	1	2158
NsiI	1	3634
PciI	1	4704
RsrII	1	3097
SacII	1	3195
Scal	1	6077
SgrAI	1	7140

pMSCV-puro-GFP-miR-155 SPONGE

5' TGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCATTTTGAAGGCATGGAAAATACATAACTGAGAATAGAGAAGTTCAGATCAAGG  
 100  
 3' ACTTCTGCGGTGGACATCCAAACCGTTCGATCGAATTCATTGCGGTAACCGTTCCTGACCTTTTATGTATTGACTCTTATCTCTTCAAGTCTAGTTCC  
 5' pCMV LTR

5' TTAGGAACAGAGACAGCAGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCG  
 200  
 3' AATCCTTGTCTCTCTGTGCTTATACCCGGTTTGTCTTATAGACACCATTTCGTCAAGGACGGGGCCGAGTCCCGGTTCTTGTCTACCAGGGGTCTACGC  
 5' pCMV LTR

5' GTCCCGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGACCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTC  
 300  
 3' CAGGGCCGGGAGTCTGCAAGATCTCTTGGTAGTCTACAAAGTCCACGGGGTTCCTGGACTTTACTGGGACACGGAATAAACTTGATTGGTTAGTCAAG  
 5' pCMV LTR

5' GCTTCTCGTCTCTGTTCGCGCCTTCTGCTCCCCGAGCTCAATAAAAAGAGCCACAAACCCCTCACTCGGCGCGCAGTCTCCGATAGACTGCGTCCCC  
 400  
 3' CGAAGAGCGAAGACAAGCGCGGAAGACGAGGGGCTCGAGTTATTTTCTCGGGTGTGGGGAGTGAGCCGCGCGGTGAGGAGGCTATCTGACGCAGCGGG  
 5' pCMV LTR

5' GGGTACCCGTATTCCCAATAAAGCCTCTTGCTGTTTGCATCCGAATCGTGGACTCGCTGATCCTTGGGAGGGTCTCCTCAGATTGATTGACTGCCACCT  
 500  
 3' CCCATGGGCATAAGGGTTATTTTCGGAGAACGACAAACGTAGGCTTAGCACCTGAGCGACTAGGAACCCCTCCAGAGGAGTCTAACTAACTGACGGGTGGA  
 5' pCMV LTR

5' CGGGGTCTTTTCAATTTGGAGGTTCCACCGAGATTGGAGACCCCTGCCAGGGACCACCGACCCCCCGCGGGAGGTAAGCTGGCCAGCGGTCTGTTTCG  
 600  
 3' GCCCCAGAAAGTAAACCTCCAAGGTGGCTCTAAACCTCTGGGGACGGGTCCCTGTTGGCTGGGGGGCGGCCCTCCATTCGACCGGTGCGCAGCAAAGC  
 5' pCMV LTR

Pack Signal

5' TGTCTGTCTCTGTCTTGTGCGTGTGTGCGCCGCATCTAATGTTTGGCCCTGCGTCTGTACTAGTTAGCTAACTAGCTCTGTATCTGGCGGACCCGTGG  
 700  
 3' ACAGACAGAGACAGAAACACGCACAAACACGGCCGTAGATTACAAACCGCGACGCAGACATGATCAATCGATTGATCGAGACATAGACCGCTGGGCACC  
 Pack Signal

5' TGGAATGACGAGTTCTGAACACCCGGCCGCAACCTGGGAGACGTCCCAGGGACTTTGGGGCCGTTTGTGGCCCGACCTGAGGAAGGGAGTCGATG  
 800  
 3' ACCTTGACTGCTCAAGACTTGTGGGCCGGCGTTGGGACCTCTGCAGGGTCCCTGAAACCCCGGCAAAAACACCGGGCTGGACTCCTTCCTCAGCTAC  
 Pack Signal

5' TGGAATCCGACCCCGTCAGGATATGTGGTTCTGGTAGGAGACGAGAACC'TAAACAGTTCCCGCCTCCGTCTGAATTTTGTCTTTCGGTTTGAACCGAA  
 900  
 3' ACCTTAGGCTGGGGCAGTCTTATACACCAAGACCATCCTCTGCTCTTGGATTTTGTCAAGGGCGGAGGCAGACTTAAAAACGAAAGCCAAACCTTGGCTT  
 Pack Signal

5' GCCGCGCTCTGTCTGCTGCAGCGCTGCAGCATCGTTCGTGTGTCTCTGTCTGACTGTGTTTCTGTATTTGTCTGAAAATTAGGGCCAGACTGTTAC  
 1000  
 3' CGGGCGCAGAACAGACGACGTCGCGACGTCGTAGCAAGACACAAACAGAGACAGACTGACACAAAGACATAAACAGACTTTTAATCCCGGTCTGACAATG  
 Pack Signal

pMSCV-puro-GFP-miR-155 SPONGE

5' CACTCCCTTAAGTTTACCTTAGGTCACCTGGAAGATGTCGAGCGGATCGCTCACACCAGTCGGTAGATGTCAAGAAGAGACGTTGGGTTACCTTCTGC  
 1100  
 3' GTGAGGGAATCAAACTGGAATCCAGTGACCTTTCTACAGCTCGCCTAGCGAGTGTGGTCAGCCATCTACAGTTCTTCTCTGCAACCCAATGGAAGACG  
 Pack Signal

5' TCTGCAGAATGGCCAACCTTTAACGTCGGATGGCCGCGAGACGGCACCTTTAACCGAGACCTCATCACCAGGTTAAGATCAAGGTCTTTTACCTGGCC  
 1200  
 3' AGACGCTTTACCGGTTGGAATTCAGCCTACCGGCGCTCTGCCGTGGAATTTGGCTCTGGAGTAGTGGGTCCAATTCTAGTTCAGAAAAGTGGACCGG  
 Pack Signal

5' CGCATGGACACCCAGACCAGGTCCTTACATCGTGACCTGGGAAGCCTTGGCTTTTGACCCCTCCCTGGGTCAAGCCCTTTGTACACCTAAGCCTCC  
 1300  
 3' GCGTACCTGTGGGTCTGGTCCAGGGATGTAGCACTGGACCTTCGGAACCGAAACTGGGGGAGGGACCCAGTTCGGGAAACATGTGGGATTCGGAGG  
 Pack Signal

5' GCCTCTCTTCTCCATCCGCCCCGTCTCTCCCTTGAACCTCCTCGTTCGACCCCGCTCGATCCTCCCTTTATCCAGCCCTCACTCCTTCTCTAGGC  
 1400  
 3' CGGAGGAGAAGGAGGTAGGCGGGGAGAGAGGGGAACTTGGAGGAGCAAGCTGGGGCGGAGCTAGGAGGAAATAGGTGGGAGTGAGGAAGAGATCCG  
 Pack Signal

BglII NcoI  
 5' GCCGGAATTAGATCTccagcgtgaccggtgcccaccatggtgagcaagggcgaggagctgttcaccggggtggtgcccatcctggtcgagctggacggcg  
 1500  
 3' CGGCCTTAATCTAGAggtcgactggccagcgtggtaccactcgttcccgtcctcgacaagtggccccaccagggtaggaccagctcgacctgccgc  
 Pa...I GFP

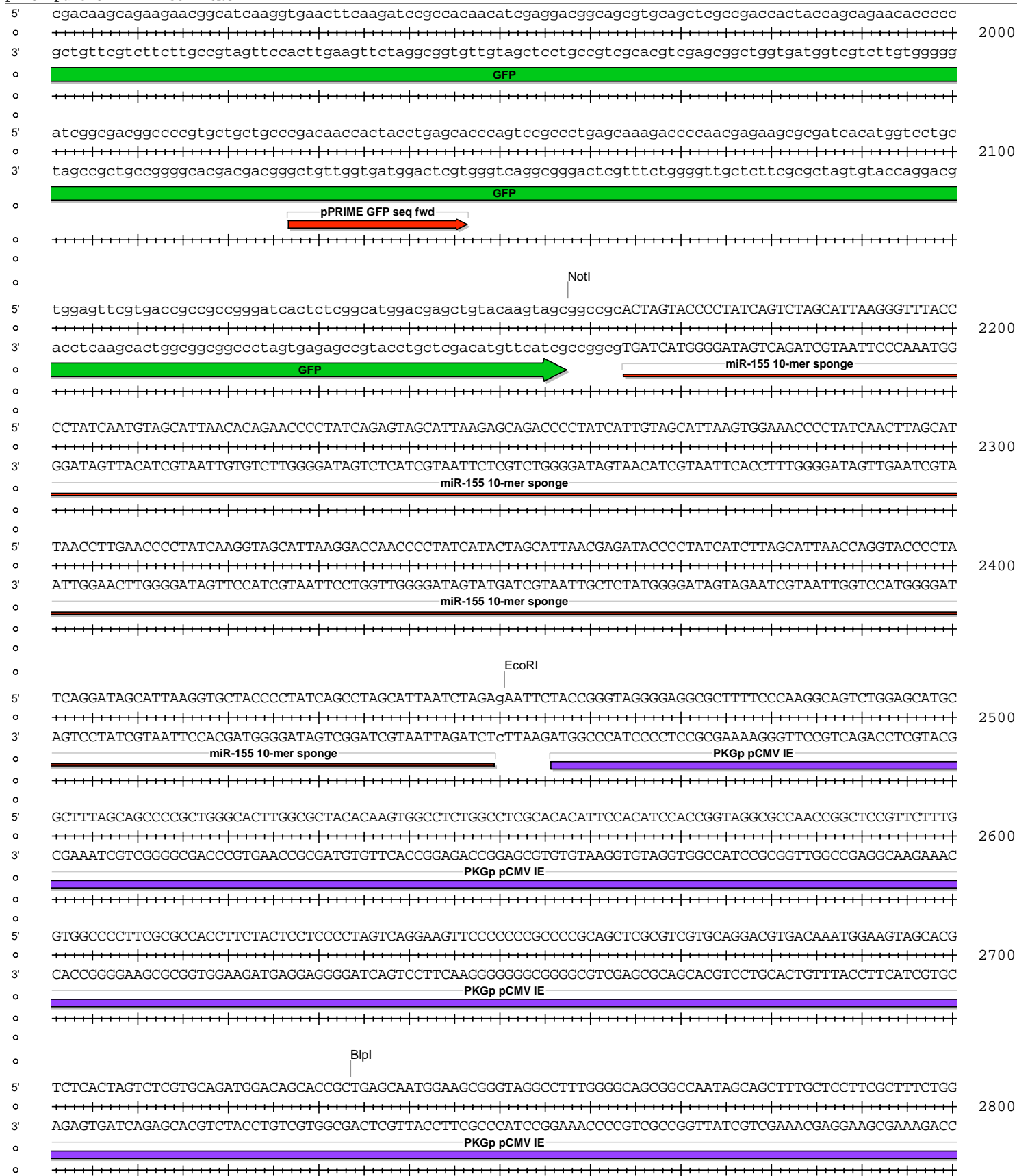
BtgZI  
 5' acgtaaacggccacaagttcagcgtgtccggcgagggcgagggcgatgccacctacggcaagctgacctgaagttcatctgcaccaccggcaagctgcc  
 1600  
 3' tgcatttgccggtgttcaagtcgcacagccgctcccgtcccgtacggtggatgcccgttcgactgggacttcaagtagacgtggtggccgttcgacgg  
 GFP

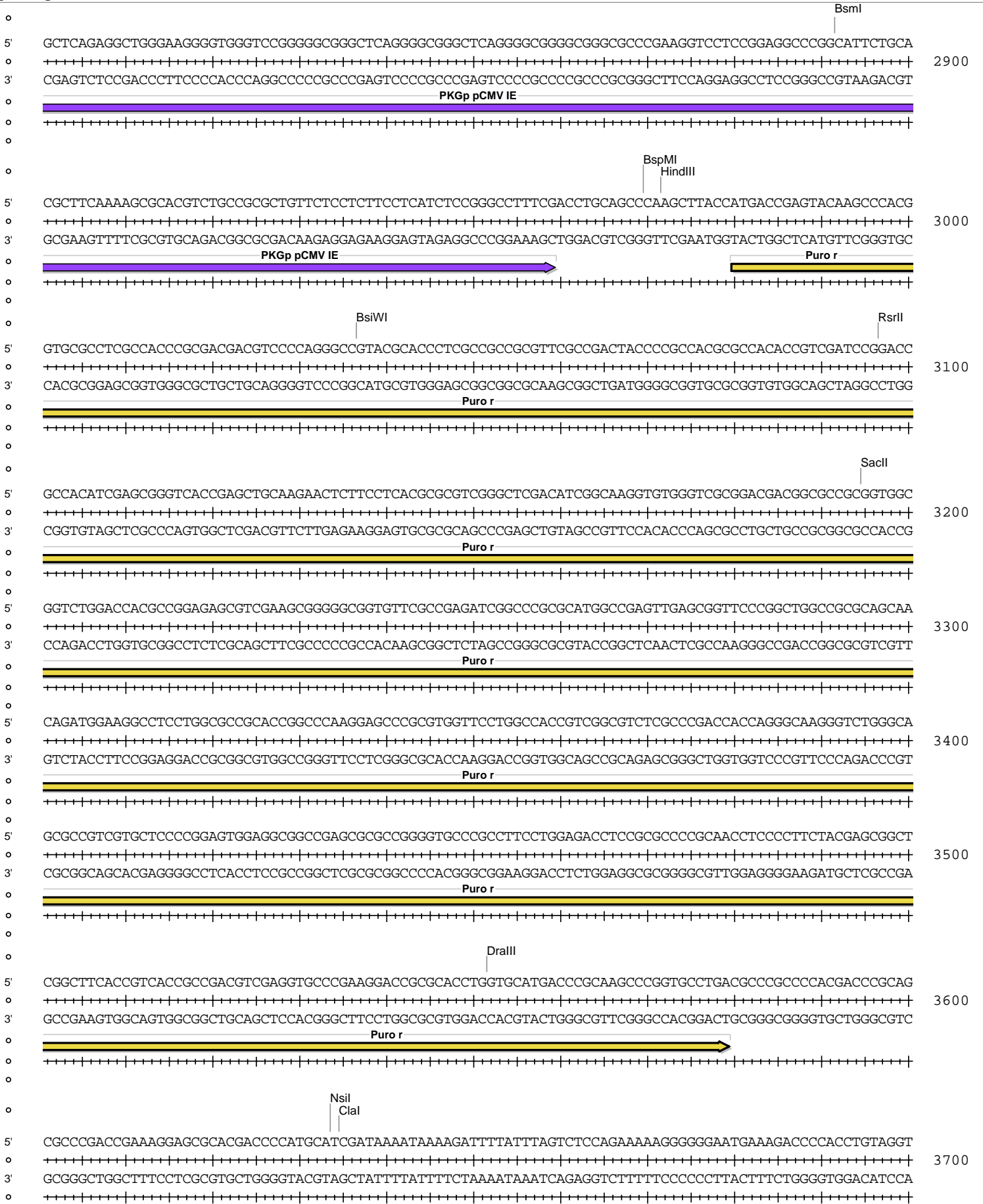
ArsI  
 5' cgtgcctggccaccctcgtgaccaccctgacctacggcgtgacgtgcttcagccgtaccccgaccacatgaagcagcagacttcttcaagtccgcc  
 1700  
 3' gcacgggaccgggtgggagcactggtgggactggatgcccacgtcacgaagtccgcatggggctggtgtacttcgtcgtgctgaagaagttcaggcgg  
 GFP

ArsI  
 5' atgcccgaaggctacgtccaggagcgcaccatcttcttcaaggacgacggcaactacaagaccgcccggaggtgaagttcgagggcgacaccctggtga  
 1800  
 3' tacgggcttccgatgcaggtcctcgcgtggtagaagaagttcctgctgcccgtgatgttctgggcccggctccacttcaagctcccgtgtgggaccact  
 GFP

5' accgcatcgagctgaaggcatcgacttcaaggaggacggcaacatcctggggcacaagctggagtacaactacaacagccacaacgtctatatcatggc  
 1900  
 3' tggcgtagctcgacttcccgtagctgaagttcctcctgcccgtttaggaccccgtgttcgacctcatgtgatgttgcggtgtgcagatatagtaccg  
 GFP

pMSCV-puro-GFP-miR-155 SPONGE





pMSCV-puro-GFP-miR-155 SPONGE

5' TTGGCAAGCTAGCTTAAGTAACGCCATTTTGC AAGCATGGAAAATACATAACTGAGAATAGAGAAGTTCAGATCAAGGTTAGGAACAGAGAGACAGCAG  
 3' AACC GTTCGATCGAATTCATTGCGGTAAAACGTTCCGTACCTTTTATGTATTGACTCTTATCTCTTCAAGTCTAGTTCCAATCCTTGTCTCTGTGTCGTC  
 3' pCMV LTR

5' AATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCGGTCCCGCCTCAGCAGTTTCT  
 3' TTATACCCGGTTTGTCTATAGACACCATTCGTCAAGGACGGGGCCGAGTCCCGTTCTTGTCTACCAGGGGTCTACGCCAGGGCGGGAGTCGTCAAAGA  
 3' pCMV LTR

5' AGAGAACCATCAGATGTTCCAGGGTGCCCAAGGACCTGAAATGACCCGTGTCCTTATTTGAACTAACCAATCAGTTCGCTTCTCGCTTCTGTTTCGCGC  
 3' TCTCTTGGTAGTCTACAAAGGTTCCACGGGGTTCCTGGACTTTACTGGGACACGGAATAAACTTGATTGGTTAGTCAAGCGAAGAGCGAAGACAAGCGCG  
 3' pCMV LTR

5' GCTTCTGCTCCCCGAGCTCAATAAAGAGCCCAACCCCTCACTCGGCGGCCAGTCTCCGATAGACTGCGTCCGCCGGGTACCCGTGTATCCAATAA  
 3' CGAAGACGAGGGGCTCGAGTTATTTCTCGGGTGTGGGGAGTGAGCCGCGCGGTCAAGGAGCTATCTGACGCAGCGGGCCCATGGGCACATAGGTTATT  
 3' pCMV LTR

5' ACCCTCTTGCAAGTTCATCCGACTTGTGGTCTCGCTGTTTCTGGGAGGGTCTCCTCTGAGTGATTGACTACCCGTGAGCGGGGTCTTTCATGGGTAAC  
 3' TGGGAGAACGTCAACGTAGGCTGAACACCAGAGCGACAAGGAACCTCCAGAGGAGACTCACTAAGTATGGGCAGTCCGCCAGAAAGTACCCATTG  
 3' pCMV LTR

5' AGTTTCTTGAAGTTGGAGAACAACATTCTGAGGGTAGGAGTCAATATTAAGTAATCCTGACTCAATTAGCCACTGTTTTGAATCCACATACTCCAATAC  
 3' TCAAAGAACTTCAACCTCTTGTGTGAAGACTCCCATCCTCAGCTTATAATTCATTAGGACTGAGTTAATCGGTGACAAAACCTTAGGTGTATGAGGTTATG

5' TCCTGAAATAGTTCATTATGGACAGCGAGAAGAGCTGGGGAGAATTAATTCGTAATCATGGTCATAGCTGTTTCTGTGTGAAATGTTATCCGCTCAC  
 3' AGGACTTTATCAAGTAATACCTGTGCGTCTTCTCGACCCCTCTTAATTAAGCATTAGTACCAGTATCGACAAAGGACACACTTTAACAATAGGCGAGTG

5' AATTCACACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCACTGCCCGCT  
 3' TTAAGGTGTGTGTATGCTCGCCTTCGTATTTACATTTTCGGACCCACGGATTACTCACTCGATTGAGTGAATTAACGCAACGCGAGTGACGGGCGA

5' TTCCAGTCGGGAAACCTGTGTCGAGCTGCATTAATGAATCGGCCAACGCGGGGAGAGCGGTTTGCATATGGGCGCTCTTCCGCTTCTCGCTCA  
 3' AAGTTCAGCCCTTTGGACAGCACGGTTCGACGTAATTAAGTACTTAGCCGGTTGCGCGCCCTCTCCGCCAAACGCATAACCCGCGAGAAGGCGAAGGAGCGAGT

5' CTGACTCGCTGCGCTCGGTTCGGTTCGGCTGCGGGAGCGGTATCAGCTCAAAAGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCAGGAAA  
 3' GACTGAGCGACGCGAGCCAGCAAGCCGACGCGCTCGCCATAGTCGAGTGAGTTTCCGCCATTATGCCAATAGGTGCTTAGTCCCTAATTGCGTCTTT

PciI  
 AflIII

5' GAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTGTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAA  
 3' CTTGTACACTCGTTTTCCGGTTCGTTTTCCGGTCTTGGCATTTTTCCGGCGCAACGACCGCAAAAGGTATCCGAGGCGGGGGACTGCTCGTAGTGTTT

5' AATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCC  
 3' TTAGCTGCGAGTTCAGTCTCCACCGCTTTGGGCTGTCTGATAATTTCTATGGTCCGCAAAGGGGGACCTTCGAGGGAGCACGCGAGAGGACAAGGCTGGG

pMSCV-puro-GFP-miR-155 SPONGE

5' TGCCGCTTACCGGATACCTGTCCGCCCTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCG  
 0 ++++++ 5000

3' ACGGCGAATGGCCTATGGACAGGCGGAAAGAGGGAAGCCCTTCGCACCGCGAAAGAGTATCGAGTGCACATCCATAGAGTCAAGCCACATCCAGCAAGC  
 0 ++++++

5' CTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCAGCCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTA  
 0 ++++++ 5100

3' GAGGTTGACCCGACACACGTGCTTGGGGGGCAAGTCGGGCTGGCGACCGGAATAGGCCATTGATAGCAGAACTCAGGTTGGGCCATTCTGTGCTGAAT  
 0 ++++++

5' TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTA  
 0 ++++++ 5200

3' AGCGGTGACCGTCGTCGGTGACCATTGTCTAATCGTCTCGCTCCATACATCCGCCACGATGTCTCAAGAACTTACCACCAGGATTGATGCCGATGTGAT  
 0 ++++++

5' GAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGG  
 0 ++++++ 5300

3' CTTCTGTCTATAAACCATAGACGCGAGACGACTTCGGTCAATGGAAGCCTTTTCTCAACCATCGAGAACTAGGCCGTTTGGTTGGTGGCGACCATCGCC  
 0 ++++++

5' TGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAA  
 0 ++++++ 5400

3' ACCAAAAAACAACGTTTCGTCTAATGCGCGTCTTTTTCCTAGAGTCTTCTAGGAACTAGAAAAGATGCCCCAGACTGCGAGTACCTTGTCTT  
 0 ++++++

5' AACTCACGTTAAGGGATTTGGTTCATGAGATTACAAAAAGGATCTTCACCTAGATCCTTTTAAATTAATAAGGTTTAAATCAATCTAAAGTATAT  
 0 ++++++ 5500

3' TTGAGTGCATTTCCCTAAAACAGTACTCTAATAGTTTTTCTAGAAAGTGGATCTAGGAAAATTTAATTTTACTTCAAATTTAGTTAGATTTTCATATA  
 0 ++++++

5' ATGAGTAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTCTGTTTCATCCATAGTTGCCTGACTCCCCGT  
 0 ++++++ 5600

3' TACTCATTTGAACCAGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGGTATCAACGGACTGAGGGGCA  
 0 ++++++  
 0 ++++++ **Amp Res** ++++++

5' CGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATA  
 0 ++++++ 5700

3' GCACATCTATGATGCTATGCCCTCCCGAATGGTAGACGGGGTACGACGTTACTATGGCGCTCTGGGTGCGAGTGGCCGAGGTCAAATAGTCGTTAT  
 0 ++++++  
 0 ++++++ **Amp Res** ++++++

5' AACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCTCCATCCAGTCTATTAATGTTGCCGGAAGCTAGAGTAAGTAGTT  
 0 ++++++ 5800

3' TTGGTGGTTCGGCCTTCCCGGCTCGCGTCTTACCAGGACGTTGAAATAGGCGGAGGTAGGTAGGATCAATAAACAACGGCCCTTCGATCTCATTCAATCA  
 0 ++++++  
 0 ++++++ **Amp Res** ++++++

5' CGCCAGTTAATAGTTTGCACACGTTGTGTCATGCTACAGGCATCGTGGTGTGACGCTCGTCTGGTATGGCTTCATTAGCTCCGTTTCCCAACG  
 0 ++++++ 5900

3' GCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCCGTAGCACCACAGTGCAGAGCAGAAACCATAACGAAGTAAGTCGAGGCCAAGGGTTGC  
 0 ++++++  
 0 ++++++ **Amp Res** ++++++

5' ATCAAGCGAGTTACATGATCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCCGATCGTTGTCAGAAGTAAGTTGGCCGAGTGTATCA  
 0 ++++++ 6000

3' TAGTTCCGCTCAATGTACTAGGGGTACAACACGTTTTTTCGCCAATCGAGGAAGCCAGGAGGTAGCAACAGTCTTCAATCAACCGGCTCACAATAGT  
 0 ++++++  
 0 ++++++ **Amp Res** ++++++



o  
5' CTCATGGTTATGGCAGCACTGCATAATTCTCTTACTGTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATCTTGAGAAT  
o ++++++ | Scal  
3' GAGTACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACTCATGAGTTGGTTCAGTAAGACTCTTA  
o **Amp Res**  
o ++++++ |  
o  
5' AGTGATATGCGGCGACCGAGTTGCTCTTGCCCGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTTC  
o ++++++ |  
3' TCACATACGCCGCTGGCTCAACGAGAACGGGCCGAGTTATGCCCTATTATGGCGCGGTGTATCGTCTTGAAATTTTCACGAGTAGTAACCTTTTGCAAG  
o **Amp Res**  
o ++++++ |  
o  
5' TTCGGGGCGAAAACCTCAAGGATCTTACCCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAAGTATCTTCAGCATCTTTTACTTTTACC  
o ++++++ |  
3' AAGCCCCGCTTTTGTAGAGTTCTTAGAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAAGTCTGAGAAAATGAAAGTGG  
o **Amp Res**  
o ++++++ |  
o  
5' AGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTCTTCTTTTCAAT  
o ++++++ |  
3' TCGCAAAGACCCACTCGTTTTTGTCTTCCGTTTTACGGCGTTTTTTCCCTTATTCCCGCTGTGCCCTTACAACCTATGAGTATGAGAAGGAAAAAGTTA  
o **Amp Res**  
o ++++++ |  
o  
5' ATTATTGAAGCATTATATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCCGCGCACATTTCCCGG  
o ++++++ |  
3' TAATAACTTCGTAAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTATTGTTTATCCCAAGGCGCGTGTAAAGGGGC  
o ++++++ |  
o  
5' AAAAGTGCCACCTGACGTCTAAGAAACCATTATATCATGACATTAACCTATAAAAATAGGCGTATCACGAGGCCCTTTCGTCTCGCGCGTTTCGGTGAT  
o ++++++ |  
3' TTTTACGGTGGACTGCAGATCTTTGGTAATAATAGTACTGTAATTGGATATTTTATCCGCATAGTGCTCCGGGAAAGCAGAGCGCGCAAGCCACTA  
o ++++++ |  
o  
5' GACGGTGAAAACCTCTGACACATGCAGCTCCCGGAGACGGTCACAGCTTGTCTGTAAGCGGATGCCGGGAGCAGACAAGCCCGTCAGGGCGCGTCAGCGG  
o ++++++ |  
3' CTGCCACTTTTGGAGACTGTGTACGTGAGGGCCTCTGCCAGTGTGGAACAGACATTGCGCTACGGCCCTCGTCTGTTCCGGCAGTCCCGCGCAGTCGCC  
o ++++++ |  
o  
o  
5' GTGTTGGCGGGTGTGCGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGACTGAGAGTGCACCATATGCGGTGTGAAATACCGCACAGATGCGTAAG  
o ++++++ | Ndel  
3' CACAACCGCCACAGCCCCGACCGAATTGATACGCCGTAGTCTCGTCTAACATGACTCTCACGTGGTATACGCCACACTTTATGGCGTGTCTACGCATTC  
o ++++++ |  
o  
5' GAGAAAATACCGCATCAGGCGCCATTGCCATTGAGGTCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAA  
o ++++++ |  
3' CTC'TTTTATGGCGTAGTCCGCGGTAAGCGGTAAGTCCGACCGGTTGACAACCCTTCCCGCTAGCCACGCCCGGAGAAGCGATAATGCGGTGACCGCTTT  
o ++++++ |  
o  
5' GGGGATGTGCTGCAAGGCGATTAAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTAACACGACGGCGCAAGGAATGGTGCATGCAAGGAGAT  
o ++++++ |  
3' CCCCCTACACGACGTTCCGCTAATTCAACCCATTGCGGTCCCAAAAGGGTCAGTGTGCAACATTTTGTGCGCGGTTCCCTTACCAGTACGTTCCCTTA  
o ++++++ |  
o  
5' GGCGCCAACAGTCCCGCGCCACGGGGCTGCCACCATACCCACGCCGAAACAAGCGCTCATGAGCCGAAAGTGCGAGCCCGATCTTCCCATCGGTG  
o ++++++ |  
3' CCGCGGGTTGTCAGGGGGCCGGTGCCCCGACGGTGGTATGGGTGCGGCTTTGTTTCGCGAGTACTCGGGCTTACCAGCTCGGGCTAGAAGGGGTAGCCAC  
o ++++++ |  
o  
o

