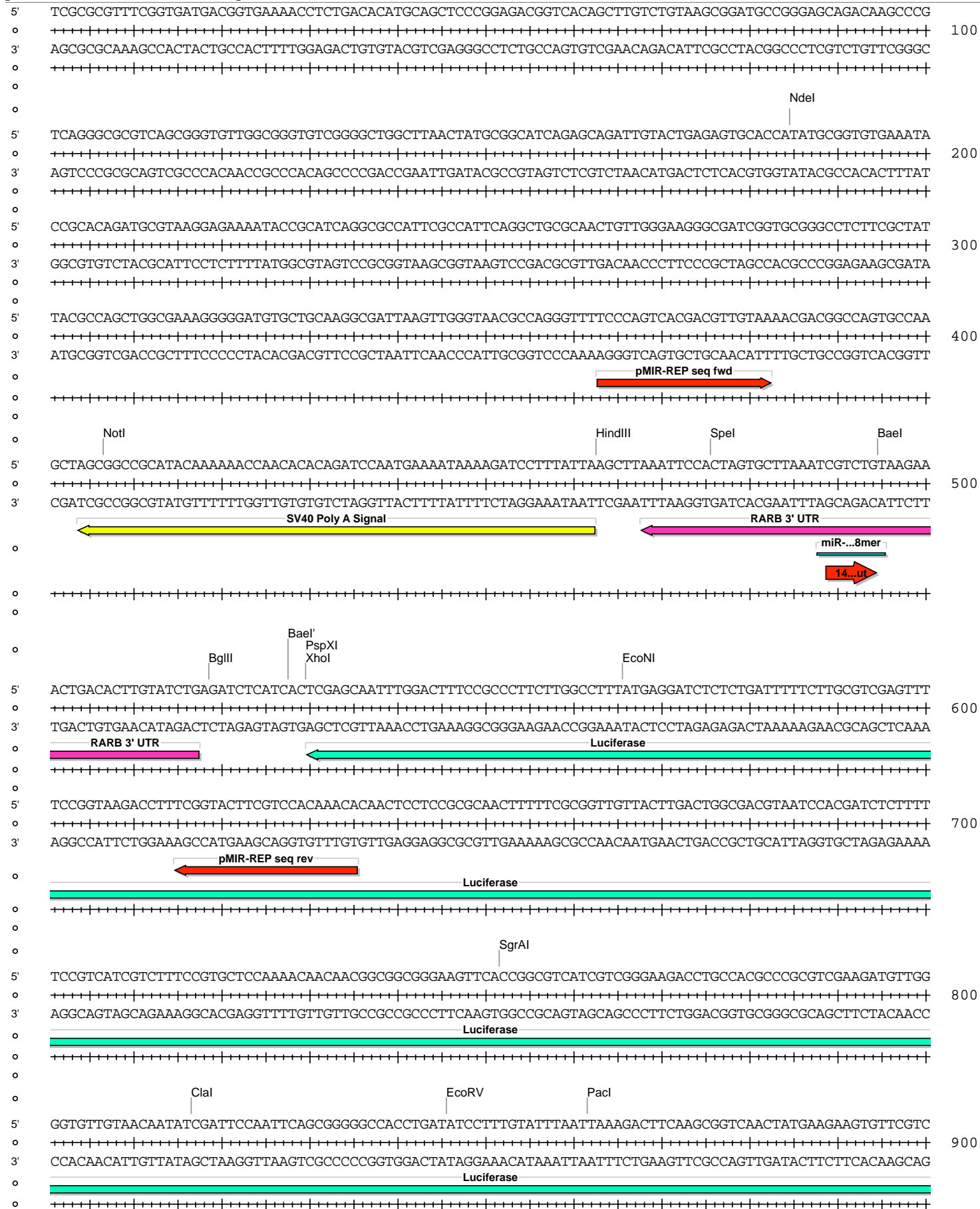


pMIR-REP-dCMV-RARB 3' UTR oligos 146a mut

Absent Sites	0	AarI,AbstI,AfeI,AfII,AleI,ApaI,AscI,AsiSI,BarI,BarI',BbvCI,BclI,BlpI,BmgBI,Bpu10I,BsgI,BstXI,BstZ17I,EcoICRI,Fall,Fall',FseI,FspAI,MauBI,MluI,MreI,NaeI,NgoMIV,NruI,PasI,PfIM1,PmeI,PmlI,PshAI,PspOMI,SacI,SanDI,SgrDI,SrfI,Swal
Acc65I	1	2454 (6124)
AccI	1	5589 (6124)
AgeI	1	5757 (6124)
AhdI	1	3811 (6124)
AjuI	1	1300 (6124)
AjuI'	1	1332 (6124)
Alol	1	2213 (6124)
Alol'	1	2181 (6124)
AlwNI	1	3334 (6124)
Arsl	1	1001 (6124)
Arsl'	1	1033 (6124)
AvrII	1	5808 (6124)
BaeI	1	495 (6124)
BaeI'	1	528 (6124)
BamHI	1	2189 (6124)
BglII	1	519 (6124)
BsaBI	1	4973 (6124)
BsmI	1	4886 (6124)
BsrGI	1	1690 (6124)
BssHII	1	5241 (6124)
Bsu36I	1	1568 (6124)
BtgZI	1	2439 (6124)
ClaI	1	817 (6124)
CspCI	1	2403 (6124)
CspCI'	1	2368 (6124)
DraIII	1	5132 (6124)
EcoNI	1	566 (6124)
EcoO109I	1	1002 (6124)
EcoRV	1	846 (6124)
HindIII	1	463 (6124)
HpaI	1	4872 (6124)
KpnI	1	2458 (6124)
MscI	1	5325 (6124)
NdeI	1	185 (6124)
NotI	1	407 (6124)
PacI	1	862 (6124)
PciI	1	2918 (6124)
PpuMI	1	1002 (6124)
PspXI	1	530 (6124)
Psrl	1	2051 (6124)
Psrl'	1	2019 (6124)
PstI	1	5780 (6124)
RsrII	1	5581 (6124)
SacII	1	5488 (6124)
Sall	1	5588 (6124)
SbfI	1	5780 (6124)
Scal	1	4291 (6124)
SfiI	1	5862 (6124)
SgrAI	1	752 (6124)
SnaBI	1	2437 (6124)
SpeI	1	476 (6124)
SspI	1	4615 (6124)
Tth111I	1	5657 (6124)
XcmI	1	1450 (6124)
XhoI	1	530 (6124)
XmnI	1	4410 (6124)

pMIR-REP-dCMV-RARB 3' UTR oligos 146a mut



pMIR-REP-dCMV-RAR 3' UTR oligos 146a mut

5' TTCGTCCCAGTAAGCTATGTCTCCAGAATGTAGCCATCCATCCCTGTCAATCAAGGCGTTGGTCGCCTCCGGATGTTTTACATAACCGGACATAATCATA
 1000
 3' AAGCAGGGTCATTTCGATACAGAGGTCTTACATCGGTAGGTAGGAACAGTTAGTTCCGCAACCAGCGAAGGCCTAACAAATGTATTGGCCTGTATTAGTAT

Luciferase

ArsI
 EcoO109I
 PpuMI

ArsI'

5' GGTCCTCTGCACATAAATTCGCCTCTCTGATTAACGCCAGCGTTTTCCCGGTATCCAGATCCACAACCTTCGCTTCAAAAAATGGAACAACCTTTACCGA
 1100
 3' CCAGGAGACTGTGTATTAAGCGGAGAGACTAATTCGCGGTTCGAAAAGGGCCATAGGTCTAGGTGTTGGAAGCGAAGTTTTTACCTTGTGTAAATGGCT

Luciferase

5' CCGCGCCCGGTTTTATCATCCCCCTCGGGTGTAAATCAGAATAGCTGATGTAGTCTCAGTGAGCCCATATCCTTGTTCGTATCCCTGGAAGATGGAAGCGTTT
 1200
 3' GGCGCGGGCCAAATAGTAGGGGAGCCACATTAGTCTTATCGACTACATCAGAGTCACTCGGGTATAGGAACAGCATAGGGACCTTCTACCTTCGCAA

Luciferase

AjuI

5' TGCAACCGCTTCCCGACTTCTTTGAAAGAGGTGCGCCCCAGAAGCAATTTCTGTAAATTAGATAAATCGTATTTGTCAATCAGAGTGCTTTTGGCG
 1300
 3' ACGTTGGCGAAGGGGTGAAGAAAGCTTCTCCACGCGGGGTCTTCGTTAAAGCACATTTAATCTATTTAGCATAAACAGTTAGTCTCACGAAAACCGC

Luciferase

AjuI'

5' AAGAATGAAAATAGGGTTGGTACTAGCAACGCCTTTGAATTTTGTAAATCCTGAAGGGATCGTAAAAACAGCTTCTTCAAATCTATACATTAAGACGA
 1400
 3' TTCTTACTTTTATCCCAACCATGATCGTTGCGTGAAACTTAAAACATTAGGACTTCCTAGCATTTTTGTGCGAGAAGAAGTTTAGATATGTAATTCCTGCT

Luciferase

XcmI

5' CTCGAAATCCACATATCAAATATCCGAGTGTAGTAAACATTCCAAACCGTGATGGAATGGGACAACACTTAAAATCGCAGTATCCGGAACGATTTGATT
 1500
 3' GAGCTTTAGGTGTATAGTTTATAGGCTCACATCATTGTAAGGTTTTGGCACTACCTTACCCTGTTGTGAATTTAGCGTCATAGGCCTTGCTAAACTAA

Luciferase

Bsu36I

5' GCCAAAAATAGGATCTCTGGCATGCGAGAATCTGACGCAGGCAGTTCTATGCGGAAGGGCCACACCCTTAGGTAACCCAGTAGATCCAGAGGAATTCATT
 1600
 3' CGGTTTTTATCCTAGAGACCGTACGCTCTTAGACTGCGTCCGTCAGATAACGCTTCCCGGTGTGGGAATCCATTGGGTCATCTAGGTCTCCTTAAGTAA

Luciferase

BsrGI

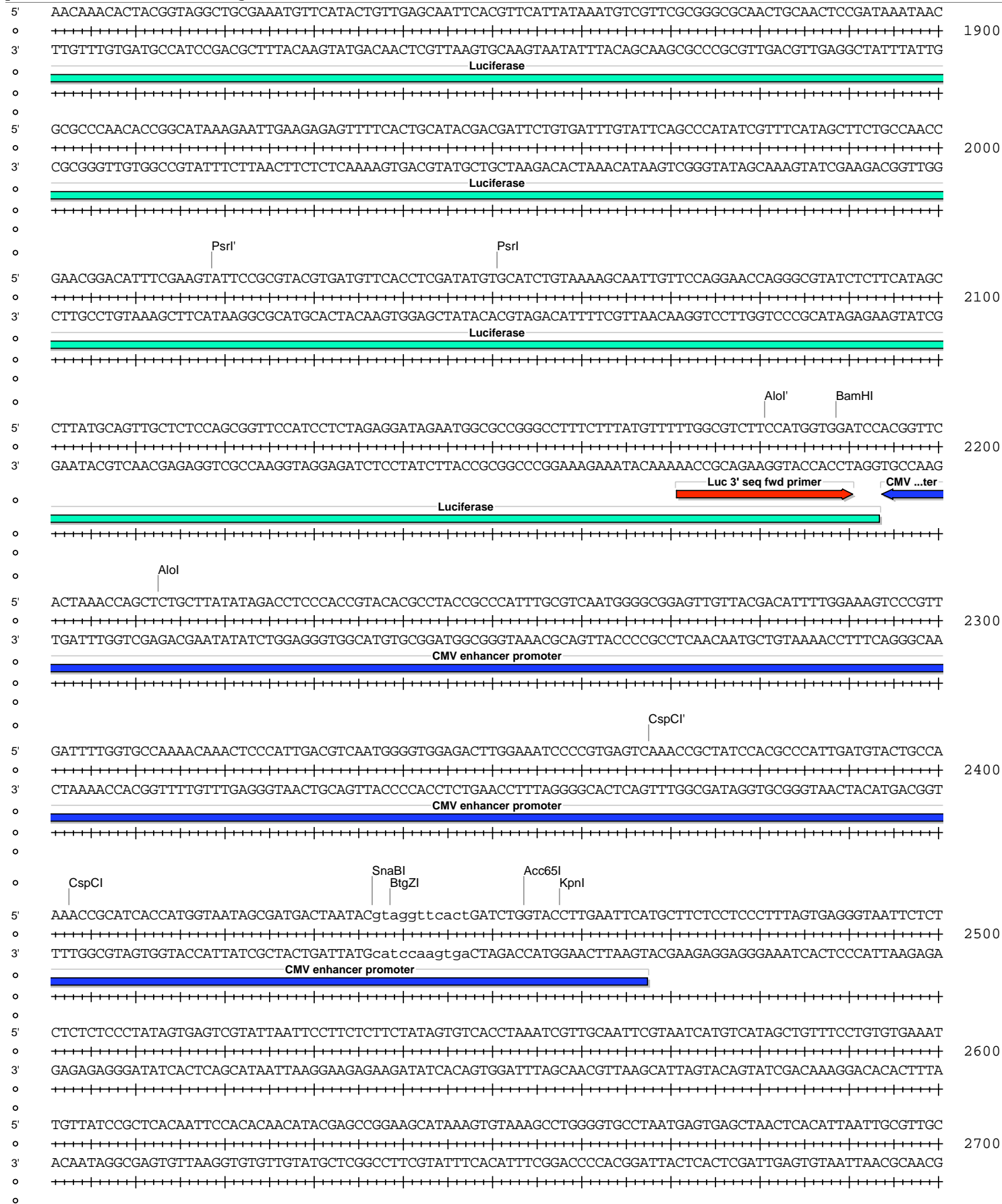
5' ATCAGTGCAATGTTTTGTACAGATCAAAGGACTCTGGTACAAAATCGTATTTCATTAACCAGGGAGGTAGATGAGATGTGACGAACGTGTACATCGACT
 1700
 3' TAGTCACGTTAACAAAACAGTGTAGTTTCTGAGACCATGTTTTAGCATAAGTAATTTGGCCCTCCATCTACTCTACACTGCTTGCACATGTAGCTGA

Luciferase

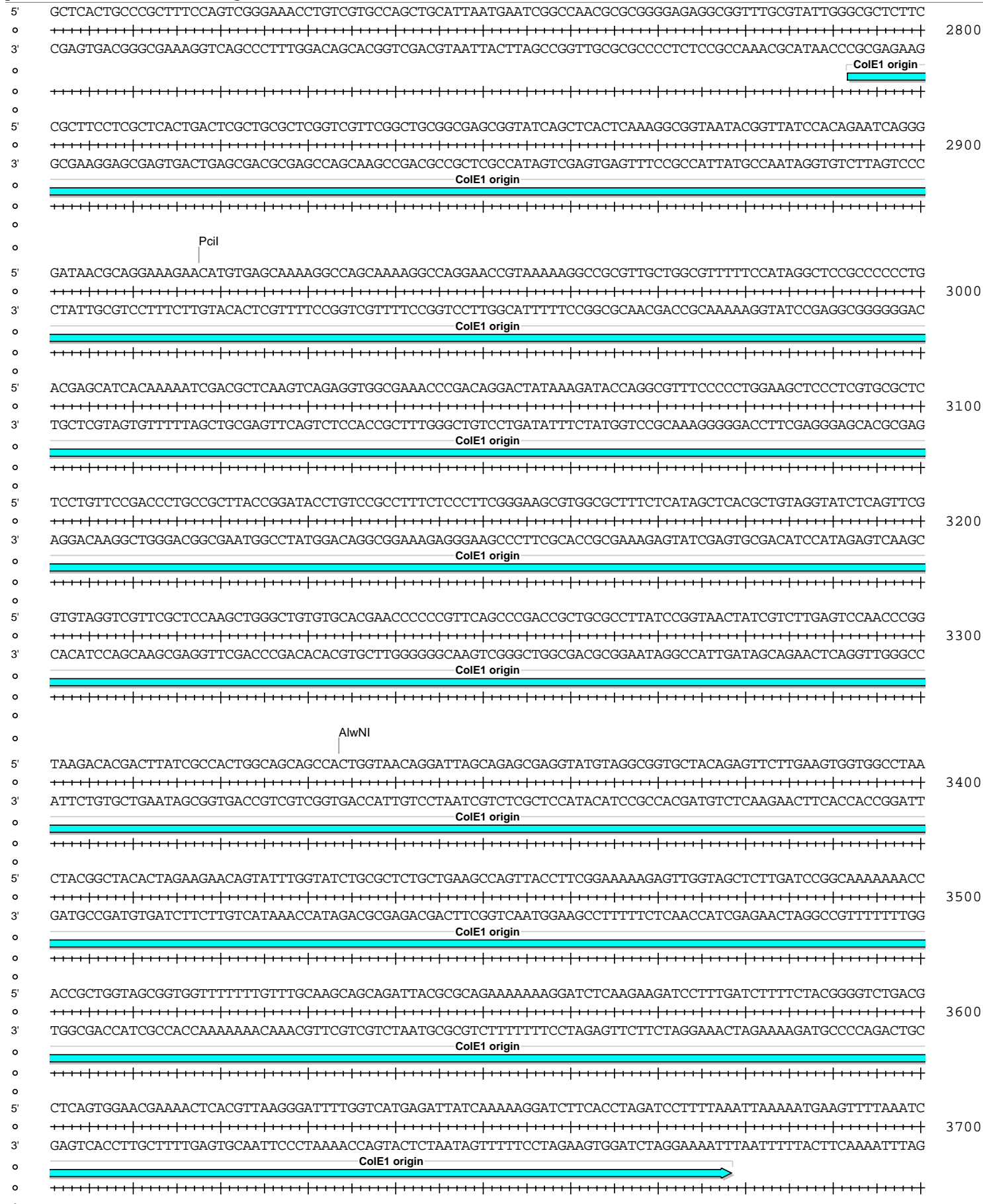
5' GAAATCCCTGGTAATCCGTTTTAGAATCCATGATAATAATTTCTGGATTATGGTAATTTTTTTGACAGTTCAAAATTTTTTGCACCCCTTTTTGGA
 1800
 3' CTTTAGGACCATTAGGCAAAATCTTAGGTACTATTATTAAGACCTAATAACCATTAAAAAACGTTGCAAGTTTTAAAAACGTTGGGGAAAAACCT

Luciferase

pMIR-REP-dCMV-RAR 3' UTR oligos 146a mut



pMIR-REP-dCMV-RAR 3' UTR oligos 146a mut



pMIR-REP-dCMV-RAR 3' UTR oligos 146a mut

5' AATCTAAAGTATATATAGATAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTCCATCCATAGTT
 3' TTAGATTTTCATATATACTCATTTGAACCAGACTGTCAATGGTTACGAATTAGTCACTCCGTGGATAGAGTCGCTAGACAGATAAAGCAAGTAGGTATCAA
 AMPr

AhdI

5' GCCTGACTCCCGTCTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCAGCTCACCAGCTCCAG
 3' CGGACTGAGGGGCGAGCACATCTATTGATGCTATGCCCTCCGAATGGTAGACCGGGGTACGACGTTACTATGGCGCTCTGGGTGCGAGTGGCCGAGGTC
 AMPr

5' ATTTATCAGCAATAAACAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCTCCATCCAGTCTATTAATTTGTTGCCGGGAAGC
 3' TAAATAGTCGTTATTTGGTCTGGCTTCCCGCTCGCGTCTTACCAGGACGTTGAAATAGGCGGAGGTAGGTCAGATAAATTAACAACGGCCCTTCG
 AMPr

5' TAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCACACGTTGTTGCCATTGCTACAGGCATCGTGGTGTACAGCTCGTCTTTGGTATGGCTTCATTCAGC
 3' ATCTCATTCAAGCGGTCAATTATCAAACGCGTTGCAACAACGGTAACGATGTCGGTAGCACCACAGTGCAGCAGCAAACCATAACCGAAGTAAGTCG
 AMPr

5' TCCGTTCCCAACGATCAAGGCGAGTTACATGATCCCCATGTTGTGCAAAAAGCGTTAGCTCCTTCGGTCTCCGATCGTTGTCAGAAGTAAGTTGG
 3' AGGCCAAGGTTGCTAGTTCGGCTCAATGTACTAGGGGTACAACACGTTTTCGCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTCAACC
 AMPr

Scal

5' CCGCAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCTTACTGTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAA
 3' GGCGTCACAATAGTGAGTACCAATACCGTCTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACTCATGAGTTGGTT
 AMPr

5' GTCATCTGAGAAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCTGGCGTCAATACGGGATAATACCGGCCACATAGCAGAACTTTAAAAGTGCATC
 3' CAGTAAGACTCTTATCACATACGCCGCTGGCTCAACGAGAACGGGCCGAGTTATGCCCTATTATGGCGCGGTGATCGTCTTGAAATTTTACAGAGTAG
 AMPr

XmnI

5' ATTGAAAACGTTCTTCGGGGCGAAAACCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCAT
 3' TAACCTTTTGAAGAAGCCCCGCTTTTGGAGAGTTCTAGAAATGGCGACAACCTTAGGTCAAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAGTCGTA
 AMPr

5' CTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAGGGAATAAGGGCGACACGAAATGTTGAATACTCATACT
 3' GAAAATGAAAGTGGTCGAAAGACCCACTCGTTTTTGTCTTCCGTTTTTACGGCGTTTTTCCCTTATTCCCGTGTGCCTTTACAACCTTATGAGTATGA
 AMPr

SspI

5' CTTCCTTTTCAATATATTGAAGCATTATCAGGGTTATGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAATAGGGGTTCCG
 3' GAAGGAAAAAGTTATAATAACTTCGTAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTTATTTGTTTATCCCCAAGGC
 AMPr

pMIR-REP-dCMV-RAR 3' UTR oligos 146a mut

5' CGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCAATTATTATCATGACATTAACCTATAAAAATAGCGGTATCACGAGATTGCAGTGAAAAA
 4800
 3' GCGTGTAAGGGGCTTTTACGGTGGACTGCAGATTCTTTGGTAATAATAGTACTGTAATTGGATATTTTATCCGCATAGTGCTCTAACGTCACCTTTT

HpaI BsmI

5' AATGCTTATTTGTGAAATTTGTGATGCTATTGCTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTCATTTCATTTTATGTT
 4900
 3' TTACGAAATAAACACTTTAAACACTACGATAACGAAATAAACATTGGTAATTCGACGTTATTTGTTCAATTGTTGTTGTTAACGTAAGTAAAATACAA

SV40 Poly A

BsaBI

5' TCAGGTTACAGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTTGGTATGGCTGATTATGATCCTCTAGAGTCGGTGGGCCCTCGGG
 5000
 3' AGTCCAAGTCCCCCTCCACACCTCCAAAAAATTCGTTTCATTTTGGAGATGTTTACACCATACCGACTAATACTAGGAGATCTCAGCCACCCGGAGCCC

5' GGCGGTGCGGGTTCGGCGGGCCCGCCCGGTGGCTTCGGTCGGAGCCATGGGGTCGTGCGCTCCTTTCGGTCGGGCGCTGCGGGTCGTGGGGCGGGCG
 5100
 3' CCGCCACGCCCCAGCCGCCCGGGGGCCACCGAAGCCAGCCTCGGTACCCAGCACGCGAGGAAAGCCAGCCCGGACGCCAGCACCCCGCCCGC

DrallI

5' TCAGGCACCGGGCTTGCGGGTTCATGCACCAGGTGCGCGGTCTTCGGGCACCTCGACGTCGGCGGTGACGGTGAAGCCGAGCCGCTCGTAGAAGGGGAGG
 5200
 3' AGTCCGTGGCCCGAACGCCAGTACGTGGTCCACGCGCCAGGAAGCCCGTGGAGCTGCAGCCGCCACTGCCACTTCGGCTCGGCGAGCATCTTCCCTCC

Puromycin resistance

BssHII

5' TTGCGGGGCGCGGAGGTCTCCAGGAAGGCGGGCACCCCGCGCTCGGCCCGCTCCACTCCGGGGAGCACGACGGCGCTGCCAGACCTTGCCCTGGT
 5300
 3' AACGCCCCGCGCTCCAGAGTCTTCCGCCCCTGGGGCCGCGGAGCCGGCGGAGGTGAGGCCCTCGTGCTGCCGCGACGGGTCTGGGAACGGGACCA

Puromycin resistance

MscI

5' GGTGCGGGGAGACGCCGACGGTGGCCAGGAACCACGCGGGCTCCTTGGGCCGGTGCGGGCCAGGAGCCTTCCATCTGTTGCTGCGGGCCAGCCGGGA
 5400
 3' CCAGCCCGCTCTGCGGCTGCCACCGTCTTGGTGCGCCCGAGGAACCCGGCCACGCGCGGTCTCCGGAAGGTAGACAACGACGCGCCGGTTCGGCCCT

Puromycin resistance

SacII

5' ACCGCTCAACTCGGCCATGCGGGGCGGATCTCGGCGAACACCGCCCCGCTTCGACGCTCTCCGGCGTGGTCCAGACCGCCACCGCGGCGCGTCTGTC
 5500
 3' TGGCGAGTTGAGCCGGTACGCGCCCGGCTAGAGCCGCTTGTGGCGGGGGCAAGCTGCGAGAGGCCGACCAGGTCTGGCGGTGGCGCCGCGGCGAGCAGG

Puromycin resistance

RsrII Sall
 Accl

5' GCGACCCACACCTTGCCGATGTCGAGCCGACGCGGTGAGGAAGAGTCTTGCAGCTCGGTGACCCGCTCGATGTGGCGGTCCGGGTCGACGGTGTGGC
 5600
 3' CGCTGGGTGTGGAACGGCTACAGCTCGGGTGCAGCCTCTTCTCAAGAACGTCGAGCCACTGGGCGAGCTACACCGCCAGGCCAGCTGCCACACCG

Puromycin resistance

