

Absent Sites	0	AarI,AbstI,AlfI,AlfI',Alol,Alol',AscI,BaeI,BaeI',BarI,BarI',BclI,BlpI,BmgBI,BsaBI,BsiWI,BstBI,BstXI,BstZ17I,FspAI,HpaI,MauBI,MreI,PmlI,PsiI,PspXI,Psrl,Psrl',SbfI,SexAI,SgrAI,SrfI,StuI,Swal,TstI,TstI',XcmI,XhoI
Acc65I	1	7071 (9455)
AfeI	1	3195 (9455)
AgeI	1	3199 (9455)
AhdI	1	8536 (9455)
AjuI	1	3927 (9455)
AjuI'	1	3895 (9455)
AsiSI	1	3578 (9455)
AvrII	1	4763 (9455)
BamHI	1	4285 (9455)
BbeI	1	984 (9455)
BbvCI	1	1767 (9455)
BcgI	1	9041 (9455)
BcgI'	1	9075 (9455)
BspMI	1	3527 (9455)
BsrGI	1	4650 (9455)
BssHII	1	1054 (9455)
BstEII	1	4264 (9455)
Bsu36I	1	7067 (9455)
EcoNI	1	1513 (9455)
FseI	1	1491 (9455)
FspI	1	8758 (9455)
KasI	1	980 (9455)
KpnI	1	7075 (9455)
NarI	1	981 (9455)
NotI	1	4241 (9455)
PacI	1	6247 (9455)
PciI	1	6223 (9455)
PshAI	1	3241 (9455)
RsrII	1	3622 (9455)
SapI	1	1443 (9455)
SfiI	1	4413 (9455)
SfoI	1	982 (9455)
SgrDI	1	2 (9455)
SmaI	1	5010 (9455)
SpeI	1	253 (9455)
SphI	1	4442 (9455)
XbaI	1	2576 (9455)
XmaI	1	5008 (9455)

p201 (pPRIME-CMV-GFP-FF3)

SgrDI

5' gtcgacggatcgggagatctcccgatcccctatggtgcactctcagtacaatctgctctgatgccgcatagttaagccagtatctgctccctgcttgtgt
 100
 3' cagctgcctagccctctagagggctaggggataccacgtgagagtcattgttagacgagactacggcgtatcaattcgggtcatagacgagggacgaacaca
 +

5' gttggaggtcgctgagtagtgcgcgagcaaaatttaagctacaacaaggcaaggcttgaccgacaattgcatgaagaatctgcttaggggttaggcgtttt
 200
 3' caacctccagcgactcatcacgcgctcgttttaattcgatggtgttccgttccgaactggctgtaacgtacttcttagacgaatccaatccgcaaaa
 +

Spel

5' gcgctgcttcgogatgtacgggcccagatatacgcgcttgacattgattattgactagttattaatagtaatacaattacgggggtcattagttcatagcccat
 300
 3' cgcgacgaagcgctacatgcccggctctatatgcgcaactgtaactaataactgatcaataattatcattagttaatgcccagtaatacaagtatcgggta
 +

5' atatggagttccgcttacataaacttacggtaaatggcccgcctggctgaccgcccaacgacccccgccattgacgtcaataatgacgtatgttcccat
 400
 3' tatacctcaaggcgcaatgtattgaatgccatttaccggggcgaccgactggcgggtgctggggcgggtaactgcagttattactgcatacaagggtta
 +

5' agtaacgccaatagggactttccattgacgtcaatgggtggagatattacggtaaacgcccaactggcagtcacatcaagtgtatcatatgccaaagtacg
 500
 3' tcatgcggttatccctgaaaggtaactgcagttaccacctcataaatgccattgacgggtgaaccgtcatgtagttcacatagatacggttcatgc
 +

5' cccctattgacgtcaatgacggtaaatggcccgcctggcattatgccagtcacatgacctatgggactttcctacttggcagtcacatctacgtattag
 600
 3' gggggataactgcagttactgccatttaccggggcgaccgtaatacgggtcatgtactggaataccctgaaaggatgaaccgtcatgtagatgcataatc
 +

5' tcatcgctattaccatgggtgatgcgggttttggcagtcacatcaatgggcgtggatagcgggttgactcacggggatttccaagtctccacccattgacgt
 700
 3' agtagcgataatggtaccactacgcaaaaaccgtcatgtagttaccgcacctatcgccaaactgagtgcccctaaagggttcagaggtgggtaactgca
 +

5' caatgggagttgttttggcaccaaaatcaacgggactttccaaaatgtcgtacaactccgccccattgacgcaaatggcggttaggcgtgtacgggtg
 800
 3' gttaccctcaaacaaaaccgtggttttagttgcctgaaagggttttacagcatggttgaggcggggtaactgcgtttaccggccatccgcatgccacc
 +

5' gaggtctatagaccagatctgagcctgggagctctctggctaactaggaaccactgcttaagcctcaataaagcttgcttgagtgcttcaagtagtg
 900
 3' ctccagatatctggctagactcggaccctcgagagaccgattgatccctgggtgacgaattcggagttatttgaacggaactcacgaagttcatcac
 +

LTR

KasI
 NarI
 SfoI
 BbeI

5' tgtgccgctctgttgtgtgactctggttaactagagatccctcagacccttttagtcagtggtgaaaaatctctagcagtgggcggccgaacagggacttgaa
 1000
 3' acacgggcagacaacacactgagaccattgatctctagggagctctgggaaaaatcagtcacaccttttagagatcgtcaccgcgggcttgcctcctgaactt
 +

LTR

BssHII

5' agcgaagggaaccagaggagctctctcgacgcaggactcggcttgcctgaagcgcgcacggcaagaggcgaggggcgactggtgagtagcgcacaaa
 1100
 3' tcgctttcccttggctcctcagagagagctgcgctcctgagccgaacgacttcgcgcgctgcccgttctccgctccccgcccgtgaccactcatgcggtttt
 +

LTR

p201 (pPRIME-CMV-GFP-FF3)

5' aagtttgtggaattggtttaacataacaaattggctgtgtgatataaaattattcataatgatagtaggaggcttggtaggttaagaatagtttttggct 2200
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' ttcaaacaccttaaccaaattgtattgtttaaccgacaccatataatTTTaaatagttactatcatcctccgaaccatccaaattcttatcaaaaaacga
 o
 o
 o
 o
 o
 5' gtactttctatagtgaaatagagtttaggcagggatattcaccattatcgtttcagaccacctccaaccccaggggacccgacaggcccaaggaatag 2300
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' catgaaagatataccttatctcaatccgtccctataagtggaatagcaaagctgggtggagggttggggctcccctgggctgtccgggttcccttatc
 o
 o
 o
 o
 o
 5' aagaagaaggtggagagagagacagagacagatccattcgattagtgaacggatcggcactcgtgcgccaattctgcagacaaatggcagttatcatcc 2400
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' ttcttctccacctctctctgtctctgtctaggttaagctaatcacttgccctagccgtgacgcacgcttaagacgtctgtttaccgtcataagtagg
 o
 o
 o
 o
 o
 5' acaattttaaaagaaaagggggattgggggtacagtgcaggggaaagaatagtagacataatagcaacagacatacaaaactaaagaattacaaaaaca 2500
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' tgttaaattttctttccccctaacccccatgtcactgcctcttcttatcatctgtattatcgctgtctgtatgtttgatttcttaagtgttttgt
 o
 o
 o
 o
 o
 5' aattacaaaaattcaaaattttcgggtttattacagggacagcagagatccagtttggttagtagccggcccgcctctagacgtattaccgcatgcatta 2600
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' ttaatgttttaagttttaaagcccaataatgtccctgtcgtctctaggtcaaaccaatcatggcccgggcagatctgcataatggcggtagcgaat
 o
 o
 o
 o
 o
 5' gttattaatagtaataattacggggtcattagttcatagcccatatatggagttccgcgttacataactacggtaaatggcccgcctggctgaccgcc 2700
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' caataattatcattagttaatgccccagtaatacagtagcgggtatatacctcaaggcgaatgattgaaatgccatttaccggggcggaccgactggcgg
 o
 o
 o
 o
 o
 5' caacgacccccgccattgacgtcaataatgacgtatgttcccatagtaacgcccaatagggactttccattgacgtcaatgggtggagatttacggtaa 2800
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' gttgctggggggcgggtaactgcagttattactgcatacaagggtatcattgcccgttatccctgaaaggtaactgcagttaccacctcataaattgccatt
 o
 o
 o
 o
 o
 5' actgccacttgccagttacatcaagtgtatcatatgccaaagtacgccccctattgacgtcaatgacggtaaatggcccgcctggcattatgccagttaca 2900
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' tgacgggtgaaaccgtcatgtagttcacatagtagcgttcatgccccgataaactgcagttactgccatttaccggggcggaccgtaatacgggtcatgt
 o
 o
 o
 o
 o
 5' tgacctatgggactttcctacttggcagttacatctacgtatttagtcacgctattaccatgggtgatgagggtttggcagttacatcaatgggctggata 3000
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' actggaataccctgaaaggatgaaccgtcatgtagatgcataatcagtagcgataatggtaccactacgcaaaaccgtcatgtagttaccgcacctat
 o
 o
 o
 o
 o
 5' gcggtttgactcacggggattccaagtctccaccattgacgtcaatgggagttgttttggccacaaaatcaacgggactttccaaaatgtcgtaaac 3100
 o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' cgccaaactgagtgccctaaagggtcagaggtggggtaactgcagttaccctcaaacaaaaccgtggttttagttgcctgaaagggttttacagcattg
 o
 o
 o
 o
 o

HIV RRE

HIV RRE

HIV RRE

Xbal

CMV

CMV

CMV

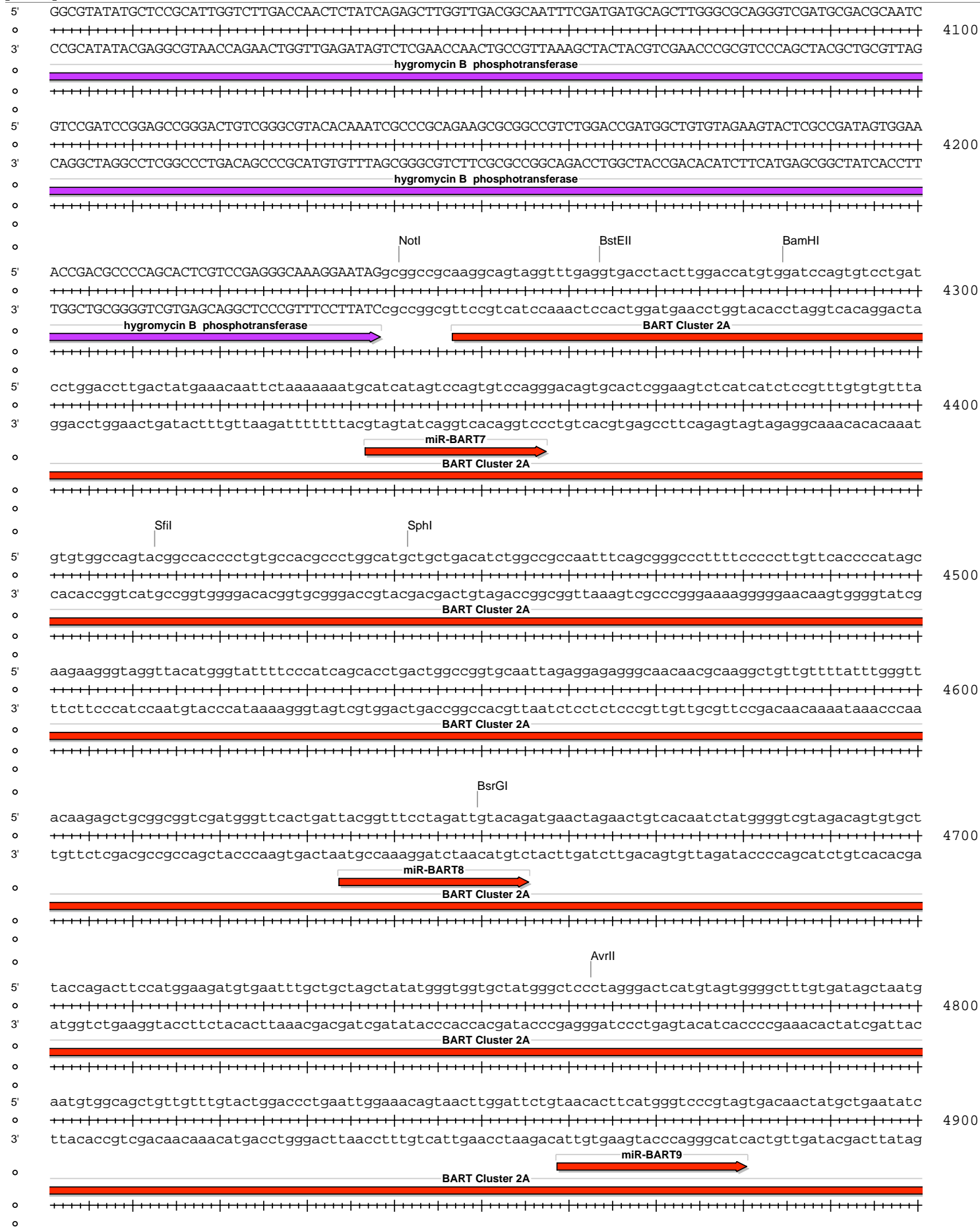
CMV

CMV

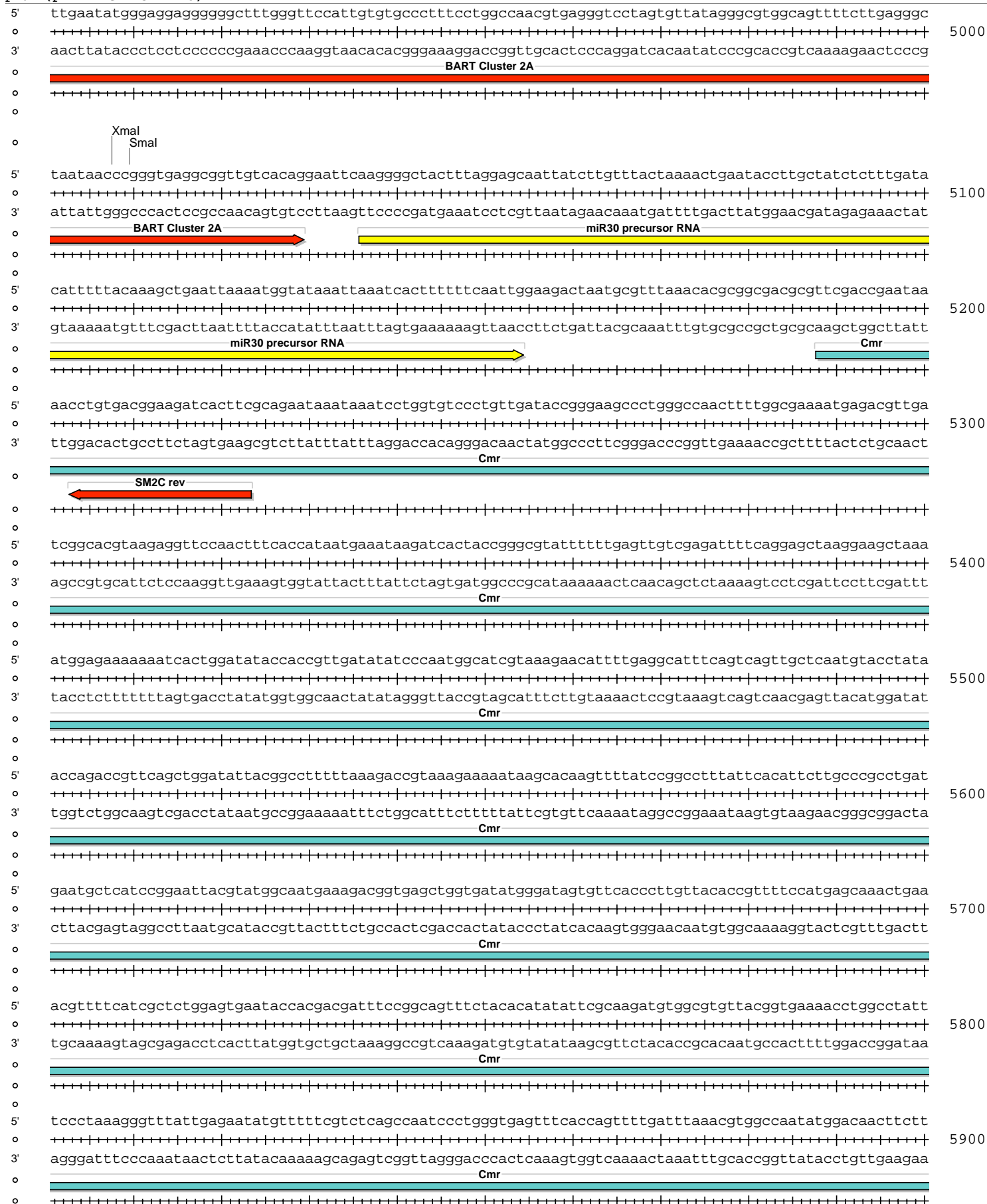
CMV



p201 (pPRIME-CMV-GFP-FF3)



p201 (pPRIME-CMV-GFP-FF3)



p201 (pPRIME-CMV-GFP-FF3)

```

5' cgccccggtttcaccatgggcaaatatatacgaagcgcacaaggtgctgatgccgctggcgattcagggtcatcatgccgtttgtgatggcttccat
o ++++++
3' gcgggggcaaaagtgggtaccgctttataaatatgcgttccgctggtccacgactacggcgaccgctaagtcgaagtagtacggcaaacactaccgaagga
o
o
o
5' gtcggcagaatgcttaataatgaattacaacagtactgcatgagtgccagggcgggcgtaattttttaaggcagttattggtgcccttaaacgcctggtt
o ++++++
3' cagccgtcttacgaattacttaagtgtgcatgacgctactcaccgtcccgcacccattaaaaaattccgtcaataaccacgggaatttgccgaccaa
o
o
o
5' gctacgcctgaataagtataataagcggatgaatggcagaaattcggatctcgaccgcgtttggcggtgggtccctgccacgcggtccgaacagaag
o ++++++
3' cgatgcccacttattcactatattcgcctacttaccgtctttaaagcctagagctggcgcaaacccgccaccgagggacggtgcccgcgaggttgtcttc
o
o
o
o
o
5' ctgatctccgaagaggatctgacatgtgtttaaacctcacttaattaagtgcaggggcgacgggatcgataagctcgcttcacgagatcatgtttaagg
o ++++++
3' gactagaggcttctcctagactgtacacaaatttgagctgaattaattcagctcccagctgccatagctattcgagcgaagtgtctagtacaaattcc
o
o
o
o
o
5' gttccggttccactaggtacaattcgatatcaagcttatcgataatcaacctctggattacaaaatttgtaaagattgactggatcttctaactatggt
o ++++++
3' caaggccaaggtgatccatgttaagctatagttcgaatagctattagttggagacctaagtgttttaaacacttctaactgaccataagaattgatata
o
o
o
o
o
5' gctccttttacgctatgtggatacgtgctttaatgcctttgtatcatgctattgcttcccgtatggcttccattttctcctccttgataaatcctggt
o ++++++
3' cgaggaaaaatgagatacacctatgagcgaatcaggaacatagtagcgcgataacgagggcataccgaaagtaaaagagagggaacatatttaggacca
o
o
o
o
o
5' tgctgtctctttatgaggagtgtggccggtgtcaggcaacgtggcggtggtgcaactgtgtttgctgacgcaacccccactggttggggcatggcac
o ++++++
3' acgacagagaaaatactcctcaacacccgggcaacagtccgttgaccgcaccacacgtgacacaaaacgactgcttgggggtgaccaacccccgtaacgggtg
o
o
o
o
o
5' cacctgtcagctcctttccgggactttcgcttccccctccctattgccacggcggaactcatcgccgctgccttgcccgctgctggacaggggctcgg
o ++++++
3' gtggacagtcgaggaagggcctgaaagcgaagggggagggataaacggtgccgccttgagtagcggcggacggaacggggcagacacctgtccccgagcc
o
o
o
o
o
5' ctgttgggcactgacaattccgtgggtgtgtcggggaatcatcgtccttccctggctgctgcgctgtgttgccacctggattctgcgcccggacgtcct
o ++++++
3' gacaaccctgactgttaaggcaccacaacagccccttagtagcaggaaaggaaccgacgagcggacacacgggtggacctagaacgcccctgcagga
o
o
o
o
o
5' tctgctacgtccctcggccctcaatccagcggaccttccctcccgccgctgctgcggctctgcccctctccgctcttcgctccttcgcccctcagac
o ++++++
3' agacgatgcaggaagccgggagttaggtgcctggaaggaagggcgccgacgacgcccggagacgcccggagagcgggagaaggcagaagcgaagcgggagctg
o
o
o
o
o

```

Cmr

Cmr

Cmr

Pcil

Pacl

WRE

WRE

WRE

WRE

WRE

WRE

6000

6100

6200

6300

6400

6500

6600

6700

6800

6900

p201 (pPRIME-CMV-GFP-FF3)

5' gagtcggatctcccttgggcccgcctccccgcacatgataccgctcgacctcgatcgagacctagaaaaacatggagcaatcacaagtagcaatacagcagc
 7000
 3' ctcagcctagagggaaaccggcggaggggcgtagctatggcagctggagctagctctggatctttttgtacctcggttagtggttcacgttatgtcgtcg
 WRE LTR

5' taccaatgctgattgtgctggctagaagcacaagaggaggaggagggttttccagtcacacctcaggtaccttaagaccaatgacttacaaggca
 7100
 3' atggttacgactaacacggaccgatctctcgtgttctcctcctccaccaaaaggtcagtgaggagtcacatggaaatctcgggtactgaatgttccgt
 LTR

5' gctgtagatcttagccactttttaaagaaaaggggggactggaagggctaattcactcccaacgaagacaagatatccttgatctgtggatctaccaca
 7200
 3' cgacatctagaatcggtgaaaaattttctttccccctgaccttcccgattaagtgagggtgcttctgttctataggaactagacacctagatgggtg
 LTR

5' cacaaggctacttccctgattggcagaactacacaccaggccagggatcagatatccactgaccttggatggtgctacaagctagtaccagttgagca
 7300
 3' gtgttccgatgaagggactaacctgctctgatgtgtgggtcccggtccctagtctataggtgactggaaacctaccacgatgttcgatcatggtcaactcgt
 LTR

5' agagaaggtagaagaagccaatgaaggagagaacacccgcttgttacaccctgtgagcctgcatgggatggatgacccggagagagaagtattagagtgg
 7400
 3' tctcttccatcttctcggttacttctcctctgtgggcgaacaatgtgggacactcggagctaccctacactgggcctctctcttataaatctcacc
 LTR

5' aggtttgacagccgcctagcatttcatcacatggcccagagctgcatccggactgtactgggtctctcgtggttagaccagatctgagcctgggagctct
 7500
 3' tccaaactgtcggcggatcgtaaagtagtgaccgggctctcgacgtaggcctgacatgaccagagagaccaatctggtctagactcggacctcgaga
 LTR

5' ctggctaactagggaaacctgcttaagcctcaataaagcttgacctgagtgctcaagtagtggtgcccgtctggtgtgtgactctggttaactagag
 7600
 3' gaccgatgatcccttgggtgacgaattcggagttatttcaacggaactcacgaagtcatcacacacgggcagacaacacactgagaccattgatctc
 LTR

5' atccctcagacccttttagtcagtggtgaaaatctctagcagcatgtgagcaaaaggccagcaaaaggccaggaaaccgtaaaaaggccgcttgctggcg
 7700
 3' tagggagtctgggaaaatcagtcacaccttttagagatcgtcgtacactcgttttccggctgtttccggctcctggcatttttccggcgaacgaccgc
 LTR

5' ttttccataggtccgccccctgacgagcatcacaaaaatcgacgctcaagttagaggtggcgaaccgacaggactataaagataccaggcgtttc
 7800
 3' aaaaaggatccgaggcgggggactgctcgtagtggttttagctgaggttcagctcaccacgctttggggtgtcctgatatttctatggtccgcaaag

5' cccctggaagctccctcgtgcctctcctgttccgacctgcccgttaccggatacctgtccgcctttctcccttcgggaagcgtggcgctttctcatag
 7900
 3' ggggaccttcgagggagcacgcgagaggacaaggctgggacggcgaatggcctatggacaggcggaaagaggggaagcccttcgcaccgcgaagagatc

5' ctcacgctgtaggtatctcagttcgggtgtaggtcgttcgctccaagctgggctgtgtgcacgaacccccggtcagccccagccgctgggccttatccgg
 8000
 3' gagtgcgacatccatagagtcagccacatccagcaagcgaggttcgaccgacacacgtgctggggggcaagtccggctggcgacgcggaatagggca

p201 (pPRIME-CMV-GFP-FF3)

```

5'  cgtgcaccaactgatcttcagcatcttttactttcaccagcgtttctgggtgagcaaaaacaggaaggcaaaatgccgcaaaaaaggaataagggcga
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  gcacgtgggttgactagaagtcgtagaaaatgaaagtggcgcgaaagaccactcgtttttgtccttccggttttacggcggtttttcccttattcccgct
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
o
5'  cacggaaatgttgaatactcatactcttcccttttcaatattattgaagcatttatcagggttattgtctcatgagcggatacatattgaatgtattta
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  gtgcctttacaacttatgagtatgagaaggaaaagtataataacttcgtaaatagtcgaataacagagtactcgcctatgtataaacttacataaat
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
o
5'  gaaaaataaacaataggggttccgcgcacatttccccgaaaagtgccacctgac
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  cttttatttgttatccccaggcgcgtgtaaaggggcttttcacgggtggactg
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
o

```

9300

9400

9455