

Absent Sites	0	AbsI,AjuI,AjuI',AlfI,AlfI',Alol,Alol',AscI,AsiSI,AvrII,BaeI,BaeI',BamHI,BarI,BarI',BclI,BlpI,BmgBI,BsaBI,BsiWI,BstBI,BstEII,BstXI,BstZ17I,FspAI,HpaI,MauBI,MreI,PmlI,PshAI,PspXI,Psrl,Psrl',RsrII,SbfI,SexAI,SfiI,SgrAI,SmaI,SphI,SrfI,StuI,Swal,TstI,TstI',Tth111I,XcmI,XhoI,XmaI
AarI	1	3985
Acc65I	1	6347
AfeI	1	3195
AgeI	1	3199
AhdI	1	7812
ApaI	1	2572
BbeI	1	984
BbvCI	1	1767
BmtI	1	3194
BsaXI	1	2191
BsaXI'	1	2161
BseYI	1	7223
BspMI	1	3985
BsrGI	1	3921
BssHII	1	1054
Bsu36I	1	6343
DrdI	1	7027
EcoNI	1	1513
EcoO109I	1	2277
EcoRI	1	4307
FseI	1	1491
FspI	1	8034
GsaI	1	7227
KasI	1	980
KpnI	1	6351
MscI	1	5158
NarI	1	981
NheI	1	3190
NotI	1	3932
NsiI	1	2598
PacI	1	5523
PciI	1	5499
PpuMI	1	2277
PsiI	1	3955
PspOMI	1	2568
PstI	1	2380
SacII	1	6124
SanDI	1	2277
SapI	1	1443
SfoI	1	982
SgrDI	1	2
SpeI	1	253
XbaI	1	2576

p201 (pPRIME-CMV-GFP-FF3)

SgrDI

5' gtcgacggatcgggagatctcccgatcccctatggtgcactctcagtacaatctgctctgatgccgcatagttaagccagtatctgctccctgcttgtgt  
 100  
 3' cagctgcctagccctctagagggctaggggataccacgtgagagtcattgtagacgagactacggcgatcaattcgggtcatagacgagggacgaacaca  
 +

5' gttggaggtcgctgagtagtgcgcgagcaaaatctaagctacaacaaggcaaggcttgaccgacaattgcatgaagaatctgcttaggggttaggcgttt  
 200  
 3' caacctccagcgactcatcacgcgctcgtttaaatcagatggttccgttccgaactggctgtaacgtacttcttagacgaatccaatccgcaaaa  
 +

Spel

5' gcgctgcttcgogatgtacgggacagatatacgcgcttgacattgattattgactagtattaatagtaatacaattacgggggtcattagttcatagcccat  
 300  
 3' cgcgacgaagcgctacatgcccggctctatatgcgcaactgtaactaataactgatcaataattatcattagttaatgcccagtaatacaagatcgggta  
 +

5' atatggagttccgcttacataaacttacggtaaatggcccgcctggctgaccgcccacgacccccgccattgacgtcaataatgacgtatgtcccat  
 400  
 3' tatacctcaaggcgcaatgtattgaatgccatttacggggcggaccgactggcgggtgctggggcgggtaactgcagttattactgcatacaagggt  
 +

5' agtaacgccaatagggactttccattgacgtcaatgggtggagtatttacggtaactgcccaactggcagtcacatcaagtgtatcatatgccaaagtacg  
 500  
 3' tcatgcggttatccctgaaaggtaactgcagttaccacactcataaatgccattgacgggtgaaccgtcatgtagttcacatagatagcgttcatgc  
 +

5' cccctattgacgtcaatgacggtaaatggcccgcctggcattatgccagtcacatgacctatgggactttcctacttggcagtcacatctacgtattag  
 600  
 3' gggggataactgcagttactgccatttacggggcggaccgtaatacgggtcatgtactggaataccctgaaaggatgaaccgtcatgtagatgcataatc  
 +

5' tcatcgctattaccatgggtgatgcggttttggcagtcacatcaatgggcgtggatagcgggttgactcacggggatttccaagtctccacccattgacgt  
 700  
 3' agtagcgataatggtaccactacgcaaaaaccgtcatgtagttaccgcacactatcgccaaactgagtgcccctaaagggttcagaggtgggtaactgca  
 +

5' caatgggagttgttttggcaccaaaatcaacgggactttccaaaatgtcgtacaactccgccccattgacgcaaatggcggttaggcgtgtacggtgg  
 800  
 3' gttaccctcaaacaaaaccgtggttttagttgcctgaaagggttttacagcattggtgagcggggtaactgcgtttaccggccatccgcacatgccacc  
 +

5' gaggtctatagaccagatctgagcctgggagctctctggctaactaggaacccactgcttaagcctcaataaagcttgcttgagtgctcaagtagtg  
 900  
 3' ctccagatatctggctagactcggaccctcgagagaccgattgatccctgggtgacgaattcggagttatttgaacggaactcacgaagttcatcac  
 +

LTR

KasI  
 NarI  
 SfoI  
 BbeI

5' tgtgccgctctgttgtgtgactctggttaactagagatccctcagacccttttagtcagtggtgaaaaatctctagcagtgggcgccgaacagggacttgaa  
 1000  
 3' acacgggcagacaacacactgagaccattgatctctagggagctctgggaaaaatcagtcacaccttttagagatcgtcaccgcgggcttgctccctgaactt  
 +

LTR

BssHII

5' agcgaagggaaccagaggagctctctcgacgcaggactcggcttgcctgaagcgcgcacggcaagaggcgaggggcgactggtagtacgcaaaa  
 1100  
 3' tcgctttcccttggctcctcagagagactgcgctcctgagccgaacgacttcgcgcgctgcccgttctccgctccccgcccgtgaccactcatgcggtttt  
 +

LTR

p201 (pPRIME-CMV-GFP-FF3)

5' attttgactagcggaggctagaaggagagagatgggtgcgagagcgtcagtattaagcgggggagaattagatcgcgatgggaaaaattcgggtaaggc  
 o ++++++  
 3' taaaactgatcgctccgatcttctctctctaccacgctctcgcagtcataattcgccccctcttaattctagcgtacccttttttaagccaattccg  
 o  
 o  
 o

LTR

1200

5' caggggaaagaaaaatataataaacatatagtatgggcaagcaggagctagaacgattcgcagttaatcctggcctgttagaaacatcagaaggct  
 o ++++++  
 3' gtcccccttcttttttatatttatttgtatatcataccggttcgctcctcgatcttgtaagcgtcaattaggaccggacaattctttagtagtctccga  
 o  
 o  
 o

LTR

1300

5' gtagacaaatactgggacagctacaaccatcccttcagacaggatcagaagaacttagatcattatataatacagtagcaaccctctattgtgtgcatca  
 o ++++++  
 3' catctgtttatgacctgtcgatgttggtaggaagtctgtcctagtctctcttgaatctagtaatatattatgtcatcgttgggagataacacacgtagt  
 o  
 o  
 o

LTR

1400

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 o ++++++  
 3' ttctatctctatcttctgtggttccctcgaaatctgttctatctccttctcgcttctgtttcattctggtggcgtgctcgttcgccggccggccgacta  
 o  
 o  
 o

SapI

FseI

LTR

1500

5' cttcagacctggaggaggagatgagggacaattggagaagtgaattatataaataaaagtagtaaaaattgaaccattaggagtagcaccaccaag  
 o ++++++  
 3' gaagtctggacctcctcctctataactcctgtaacctcttcaactaataatattatatttcatcatttttaacttggtaacctcatcgtgggtggttc  
 o  
 o  
 o

EcoNI

LTR

HIV RRE

1600

5' gcaaagagaagagtggcgcagagagaaaaagagcagtggaataggagcttggctccttgggttcttgggagcagcaggaagcactatgggcgacgct  
 o ++++++  
 3' cgtttctctctcaccacgctctctcttttctcgtcacccttatcctcgaacaaggaaccaagaacctcgtcgtcctcgtgataaccgcgctcgca  
 o  
 o  
 o

HIV RRE

1700

5' caatgacgctgacggtacaggccagacaattattgtctggtatagtcgagcagcagaacaatttgctgagggctattgaggcgcaacagcatctgttgca  
 o ++++++  
 3' gttactgcgactgccatgtccggtctgtaataacagaccatcacgctcgtcgtcttgtaaacgactcccgataactccgctgtgctgtagacaacgt  
 o  
 o  
 o

BbvCI

HIV RRE

1800

5' actcacagtctggggcatcaagcagctccaggcaagaatcctggctgtgaaagatacctaaaggatcaacagctcctggggatttggggtgctctgga  
 o ++++++  
 3' tgagtgtcagacccttagtctcgtcgaggtccgcttcttaggaccgacaccttctatggatttctagtagtgcgaggaccctaaacccaacgagacct  
 o  
 o  
 o

HIV RRE

1900

5' aaactcatttgcaccactgctgtgccttggaaatgctagtggagtaataatctctggaacagatttggaaatcacacgacctggatggagtgggacagag  
 o ++++++  
 3' tttagtaaacggtggtgacgacacggaaccttacgatcaacctcattatttagagaccttcttaaaccttagtgtgctggacctacctcaccctgtctc  
 o  
 o  
 o

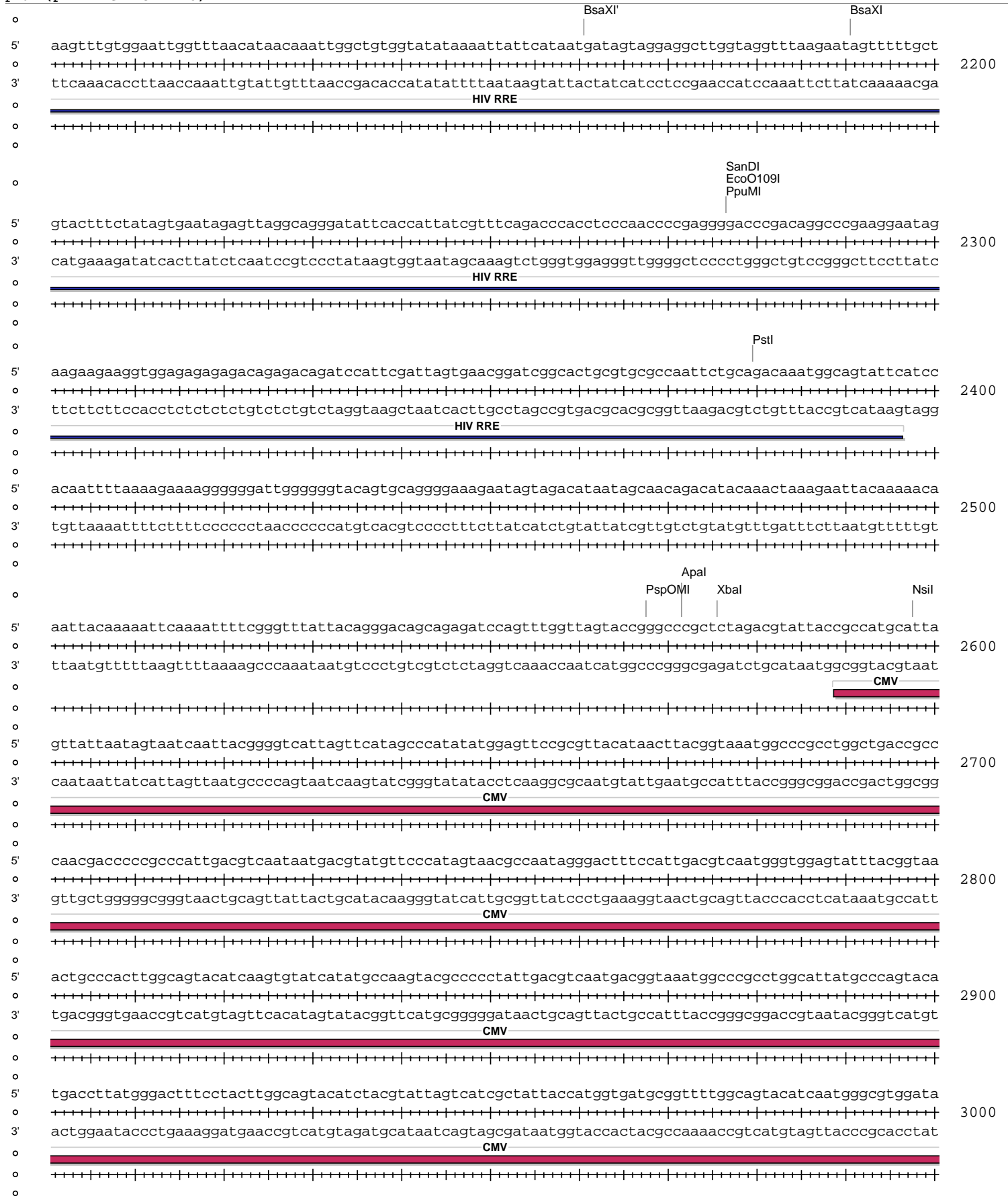
HIV RRE

2000

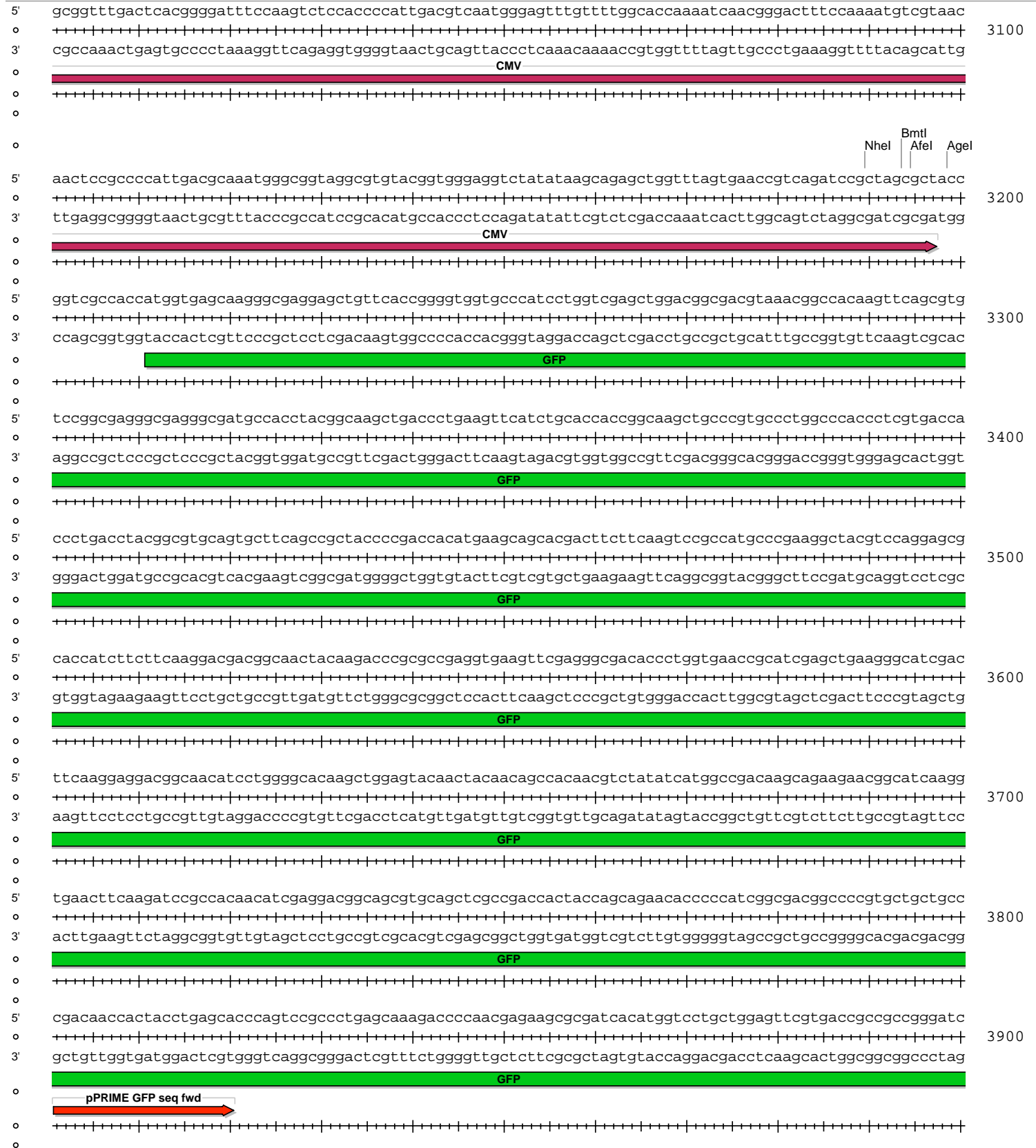
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 o ++++++  
 3' ttaattgttaatgtgttcgaattatgtgaggaattaacttcttagcgtttggctcgttctttcttacttgttcttaataaccttaactctatttaccg  
 o  
 o  
 o

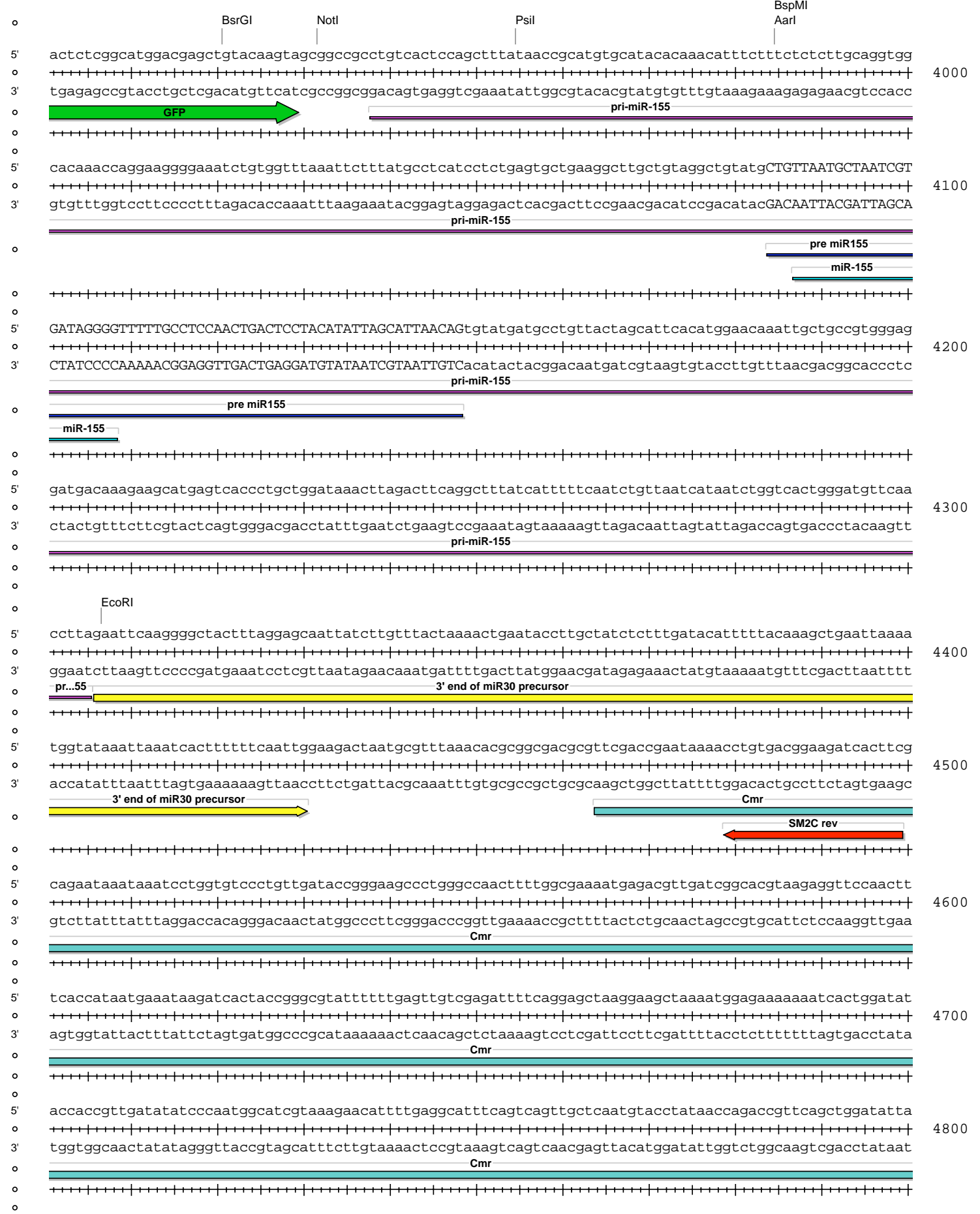
HIV RRE

2100



p201 (pPRIME-CMV-GFP-FF3)





p201 (pPRIME-CMV-GFP-FF3)

5' cggccttttaagaccgtaaagaaaaataagcacaagttttatccggcctttattcacattcttgcccgctgatgaatgctcatccggaattacgtat  
 4900  
 3' gccgaaaaatcttgccatttctttttattcgtggtcaaaatagggccgaaataagtgtaagaacggcggaactacttacgagtaggccttaatgcata  
 Cmr

5' ggcaatgaaagacggtgagctggtgatatgggatagtggtcacccttgttacaccgttttccatgagcaaactgaaacgttttcatcgctctggagtgaa  
 5000  
 3' ccgttactttctgccactcgaccactataccctatcaccaagtggaacaatgtggcaaaaggtactcgtttgactttgcaaaagtagcgagacctcactt  
 Cmr

5' taccacgacgatttccggcagtttctacacatatattcgcaagatgtggcgtgttacggtgaaaacctggcctatttccctaaagggttattgagaata  
 5100  
 3' atgggtgctgctaaaggccgtcaaagatgtgtatataagcgttctacaccgcacaatgccacttttgaccggataaagggtattcccaaataactctat  
 Cmr

5' tgttttctgctcagccaatccctgggtgagttcaccagtttgatttaaactggccaatggcaactcttctgccccgttttcccatgggcaa  
 5200  
 3' acaaaaagcagagtcggttagggaccactcaaagtggtcaaaactaaatttgaccgggtatacctgttgaagaagcgggggcaaaagtggtaccggt  
 MscI  
 Cmr

5' atattatacgaaggcgacaagggtgctgatgccgctggcgattcagggtcatcatgcccgtttgtgatggcttccatgtcggcagaatgcttaatgaatta  
 5300  
 3' tataatatgcgttccgctgttccacgactacggcgaccgctaagccaagtacgcaaacactaccgaaggtacagccgtctacgaattacttaat  
 Cmr

5' caacagtactgcgatgagtgaggcggggcgggtaatttttaaggcagttattggtgcccttaaaccgctggttgctacgcctgaataagtataata  
 5400  
 3' gttgtcatgacgctactcaccgtcccgcgccatataaaaaatcogtcaataaccacgggaatttgcggaccaacgatgcggactattcactattat  
 Cmr

5' agcggatgaatggcagaaattcggatctcgaccggtttggcggtggctcctgccacgcggtccgaacagaagctgatctccaagaggatctgaca  
 5500  
 3' tcgcctacttaccgctttaaagcctagagctggcgcaaacgccaccgaggagcgtgctgcccagagctgtcttcgactagaggttctcctagactgt  
 Cmr  
 PciI

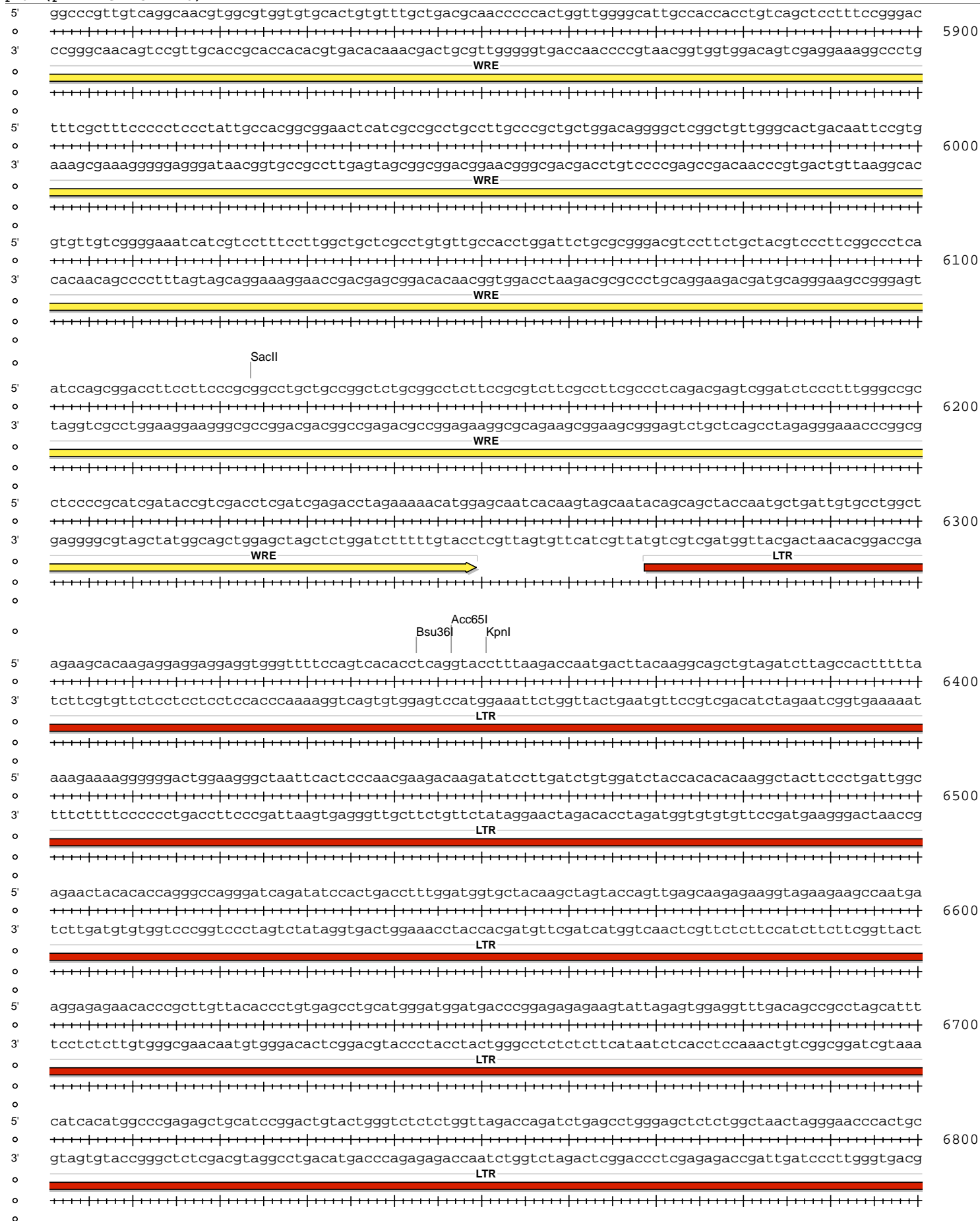
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 Pacl

5' cgatatcaagcttatcgataatcaacctctggattacaaaatttgtaaagattgactggtattcttaactatgttgctccttttacgctatgtggatac  
 5700  
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 WRE

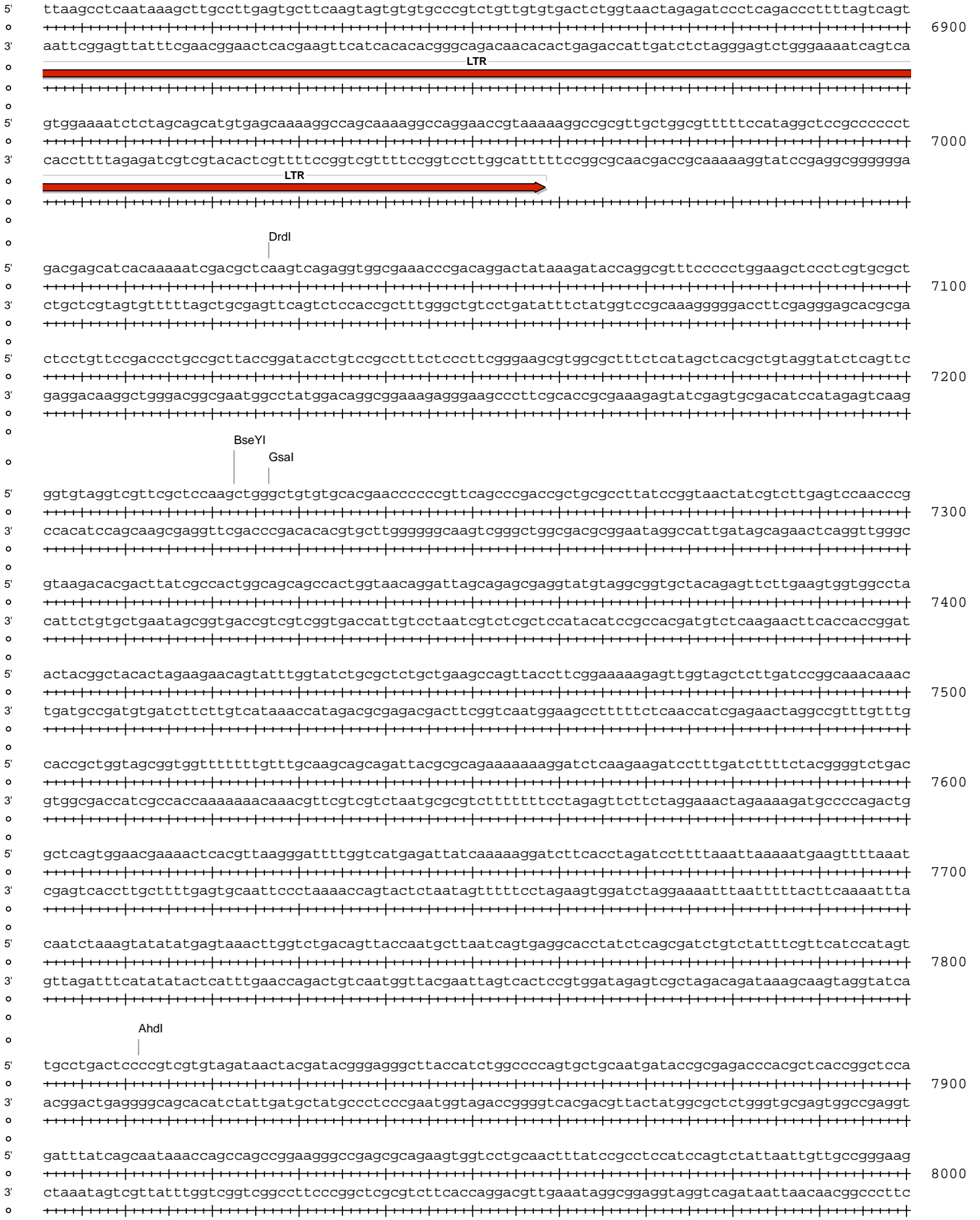
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 5800  
 3' cgacgaaattacgaaacatagtacgataacgaaagggcataaccgaaagtaaaagaggaggaacatatntaggaaccaacgacagagaataactcctcaaca  
 WRE



p201 (pPRIME-CMV-GFP-FF3)



p201 (pPRIME-CMV-GFP-FF3)



Fspl

```
o
5' ctagagtaagtagttccgcaagtttaatagtttgcgcaacgttggtgccattgctacaggcatcgtggtgtcacgctcgtcgtttggtagggcttcattcag
o ++++++ 8100
3' gatctcattcatcaagcgggtcaattatcaaacgcggttgcaacaacggtaacgatgtccgtagcaccacagtgcgagcagcaaaccataccgaagtaagtc
o ++++++
o
5' ctccggttcccaacgatcaaggcgagttacatgatccccatggtgtgcaaaaaagcggtagctccttcgggtcctccgatcgttgtcagaagtaagttg
o ++++++ 8200
3' gaggccaaggttgctagttccgctcaatgtactaggggtacaacacgtttttcgccaatcgaggaagccaggaggctagcaacagctcttcattcaac
o ++++++
o
5' gccgcagtggtatcactcatggttatggcagcactgcataattctcttactgtcatgccatccgtaagatgcttttctgtgactggtagtactcaacca
o ++++++ 8300
3' cggcgtcacaatagtgagtaccaataccgctcgtgacgtattaagagaatgacagtagcggtaggcattctacgaaaagacactgaccactcatgagttggt
o ++++++
o
5' agtcattctgagaatagtgtatgcggcgaccgagttgctcttgcccggcgtcaatacgggataataccgcgccacatagcagaactttaaagtgtcat
o ++++++ 8400
3' tcagtaagactcttatcacatacgccgctgggtcaacgagaacgggcccgcagttatgccctattatggcggggtgatcgtcttgaaatttcacgagta
o ++++++
o
5' cattggaaaacgttcttcggggcgaaaactctcaaggatcttaccgctgttgagatccagttcgatgtaaccactcgtgcacccaactgatcttcagca
o ++++++ 8500
3' gtaaccttttgcaagaagccccgcttttgagagttcctagaatggcgacaactctaggtcaagctacattgggtgagcacgtgggttgactagaagtcgt
o ++++++
o
5' tctttactttcaccagcgtttctgggtgagcaaaaacaggaaggcaaaatgccgcaaaaaaggaataagggcgacacggaaatgttgaatactcatac
o ++++++ 8600
3' agaaaaatgaaagtggtcgcaaaagaccactcgtttttgtccttccggttttacggcgctttttcccttattcccgtgtgcctttacaacttatgagtatg
o ++++++
o
5' tcttcccttttcaatattattgaagcatttatcagggttattgtctcatgagcggatacataattgaaatgtatttagaaaaataaacaataggggttcc
o ++++++ 8700
3' agaaggaaaaagttataataacttcgtaaatagtccaataaacagagtactcgcctatgtataaacttacataaatctttttattgtttatcccaagg
o ++++++
o
5' gcgcacatttccccgaaaagtgccacctgac
o ++++++ 8731
3' cgcgtgtaaaggggcttttcacgggtgactg
o ++++++
o
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