

|              |   |  |
|--------------|---|--|
| Absent Sites | 0 | AarI,AbsI,AjuI,AjuI',AlfI,AlfI',AscI,AsiSI,AvrII,BaeI,BaeI',BamHI,BarI,BarI',BclI,BmgBI,BsiWI,BspMI,BstBI,BstEII,BstXI,BstZ17I,FspAI,HpaI,MauBI,MreI,PmlI,PshAI,PsrI,PsrI',RsrII,SbfI,SgrAI,Smal,SphI,SrfI,Swal,TstI,TstI',Tth111I,XcmI,XmaI |
| Acc65I       | 1 | 6447   |
| AfeI         | 1 | 3195   |
| AgeI         | 1 | 3199   |
| AhdI         | 1 | 7912   |
| Alol         | 1 | 4332   |
| Alol'        | 1 | 4300   |
| ApaI         | 1 | 2572   |
| BbeI         | 1 | 984  |
| BblI         | 1 | 4366   |
| BmtI         | 1 | 3194   |
| BsaBI        | 1 | 4109   |
| BsrGI        | 1 | 3921   |
| BssHII       | 1 | 1054   |
| Bsu36I       | 1 | 6443   |
| DrdI         | 1 | 7127   |
| EcoNI        | 1 | 1513   |
| FseI         | 1 | 1491   |
| FspI         | 1 | 8134   |
| KasI         | 1 | 980  |
| KpnI         | 1 | 6451   |
| MscI         | 1 | 5258   |
| NarI         | 1 | 981  |
| NheI         | 1 | 3190   |
| NotI         | 1 | 3932   |
| NsiI         | 1 | 2598   |
| PacI         | 1 | 5623   |
| PciI         | 1 | 5599   |
| PsiI         | 1 | 3965   |
| PspOMI       | 1 | 2568   |
| PspXI        | 1 | 4390   |
| PstI         | 1 | 2380   |
| SacII        | 1 | 6224   |
| SanDI        | 1 | 2277   |
| SexAI        | 1 | 3989   |
| SfiI         | 1 | 3940   |
| SfoI         | 1 | 982  |
| SgrDI        | 1 | 2  |
| SpeI         | 1 | 253  |
| StuI         | 1 | 4061   |
| XbaI         | 1 | 2576   |
| XhoI         | 1 | 4390   |

p201 (pPRIME-CMV-GFP-FF3)

SgrDI

5' gtcgacggatcgggagatctcccgatcccctatggtgcactctcagtacaatctgctctgatgccgcatagttaagccagtatctgctccctgcttgtgt  
 100  
 3' cagctgcctagccctctagagggctaggggataccacgtgagagtcagttagacgagactacggcgtatcaattcgggtcatagacgagggacgaacaca  
 +

5' gttggaggtcgctgagtagtgcgcgagcaaaathtaagctacaacaaggcaaggcttgaccgacaattgcatgaagaatctgcttaggggttaggcgttt  
 200  
 3' caacctccagcgactcatcacgcgctcgtttaaatcagatggttccgttccgaactggctgtaacgtacttcttagacgaatccaatccgcaaaa  
 +

Spel

5' gcgctgcttcgogatgtacgggcccagatatacgcgcttgacattgattattgactagttattaatagtaatacaattacgggggtcattagttcatagcccat  
 300  
 3' cgcgacgaagcgctacatgcccggctctatatgcgcaactgtaactaataactgatcaataattatcattagttaatgcccagtaatacaagatcgggta  
 +

5' atatggagttccgcttacataaacttacggtaaatggcccgcctggctgaccgcccaacgacccccgccattgacgtcaataatgacgtatgtcccat  
 400  
 3' tatacctcaaggcgcaatgtattgaatgccatttacggggcggaccgactggcgggtgctggggcgggtaactgcagttattactgcatacaagggt  
 +

5' agtaacgccaatagggactttccattgacgtcaatgggtggagatattacggtaaacgcccaactggcagtacatcaagtgtatcatatgccaaagtacg  
 500  
 3' tcatgcggttatccctgaaaggtaactgcagttaccacctcataaatgccattgacgggtgaaccgtcatgtagttcacatagatacggttcatgc  
 +

5' cccctattgacgtcaatgacggtaaatggcccgcctggcattatgccagtacatgacctatgggactttcctacttggcagtacatctacgtattag  
 600  
 3' gggggataactgcagttactgccatttacggggcggaccgtaatacgggtcatgtactggaataccctgaaaggatgaaccgtcatgtagatgcataatc  
 +

5' tcatcgctattaccatgggtgatgcgggttttggcagtacatcaatgggcgtggatagcgggttgactcacggggatttccaagtctccacccattgacgt  
 700  
 3' agtagcgataatggtaccactacgcaaaaaccgtcatgtagttaccgcacctatcgccaaactgagtgcccctaaagggttcagaggtgggtaactgca  
 +

5' caatgggagttgttttggcaccaaaatcaacgggactttccaaaatgctgtaacaactccgccccattgacgcaaatggcggttaggcgtgtacgggtg  
 800  
 3' gttaccctcaaacaaaaccgtggttttagttgcctgaaagggttttacagcatggttgaggcgggtaactgcgtttaccggccatccgcacatgccacc  
 +

5' gaggtctatagaccagatctgagcctgggagctctctggctaactaggaaccactgcttaagcctcaataaagcttgcttgagtgctcaagtagtg  
 900  
 3' ctccagatatctggctagactcggaccctcgagagaccgattgatccctgggtgacgaattcggagttatttgaacggaactcacgaagttcatcac  
 +

LTR

KasI  
 NarI  
 SfoI  
 BbeI

5' tgtgccgctctgttgtgtgactctggttaactagagatccctcagacccttttagtcagtggtgaaaaatctctagcagtgggcggccgaacagggacttgaa  
 1000  
 3' acacgggcagacaacacactgagaccattgatctctagggagctctgggaaaaatcagtcacaccttttagagatcgtcaccgcgggcttgcctcctgaactt  
 +

LTR

BssHII

5' agcgaagggaaccagaggagctctctcgacgcaggactcggcttgcctgaagcgcgcacggcaagaggcgaggggcggcactggtgagtagcgcacaaa  
 1100  
 3' tcgctttcccttggctcctcagagagactgcgctcctgagccgaacgacttcgcgctgcccgttctccgctccccgcccgtgaccactcatgcggtttt  
 +

LTR

p201 (pPRIME-CMV-GFP-FF3)

5' attttgactagcggaggctagaaggagagagatgggtgcgagagcgtcagtattaagcgggggagaattagatcgcgatgggaaaaattcgggtaaggc  
 1200  
 3' taaaactgatcgctccgatcttctctctctaccacgctctcgcagtcataattcgccccctcttaattctagcgtacccttttttaagccaattccg  
 LTR

5' caggggaaagaaaaatataataaacatatagtagggcaagcaggagctagaacgattcgcagttaatcctggcctgttagaaacatcagaaggct  
 1300  
 3' gtcccccttctttttatattttgtatatcataccggttcgctcctcgatcttgtaagcgtcaattaggaccggacaatctttagtagtctccga  
 LTR

5' gtagacaaactgggacagctacaaccatcccttcagacaggatcagaagaacttagatcattatataatacagtagcaaccctctattgtgtgcatca  
 1400  
 3' catctgtttatgacctgtcgatgttggtaggaagtctgtcctagctctcttgaatctagtaatatattatgtcatcgtgggagataacacacgtagt  
 LTR

5' aaggatagagataaaagacaccaaggaagcttttagacaagatagaggaagagcaaaacaaaagtaagaccaccgcacagcaagcggccggccgctgat  
 1500  
 3' ttctatctctatcttctgtggttcttcgaaatctgttctatctccttctcgtttcttctcattctggtggcgtgctcgttcgccggccggccgacta  
 LTR  
 Fsel

5' cttcagacctggaggaggagatgagggacaattggagaagtgaattatataataataaagtagtaaaaattgaaccattaggagtagcaccaccaag  
 1600  
 3' gaagtctggacctcctcctctataactcctgtaacctctcacttaatatattatattcatcatttttaacttggtaatcctcatcgtgggtggttc  
 LTR  
 HIV RRE  
 EcoNI

5' gcaaagagaagagtggcgcagagagaaaaagagcagtggaataggagctttgttccttgggttcttgggagcagcaggaagcactatgggpcagcgt  
 1700  
 3' cgtttctctctcaccacgtctctcttttctcgtaacccttatcctcgaacaaggaaccaagaaccctcgtcgtcctcgtgataaccgcgctcgca  
 HIV RRE

5' caatgacgctgacggtacaggccagacaattatgtctggtatagtgacgagcagaacaatttgctgagggctattgaggcgcaacagcatctgttgca  
 1800  
 3' gttactgagactgccatgtccggtctgttaataacagaccatatcacgctcgtcgtcttggtaaacgactcccgataactccgcgtgtgctgtagacaacgt  
 HIV RRE

5' actcacagtctggggcatcaagcagctccaggcaagaatcctggctgtgaaagatacctaaaggatcaacagctcctggggatttggggtgctctgga  
 1900  
 3' tgagtgtcagaccccgtagttcgtcgaggtccgttcttaggaccgacacctttctatggatttcttagtgtcgaggaccctaaaccccaacgagacct  
 HIV RRE

5' aaactcatttgaccactgctgtgccttggaaatgctagtggagtaataaatctctggaacagatttggaaatcacacgacctggatggagtgggacagag  
 2000  
 3' tttagtaaacggtgacgacacggaaccttacgatcaacctcattatttagagaccttgtctaaaccttagtgtgctggacctacctcacctgtctc  
 HIV RRE

5' aaattaacaattacacaagcttaatacactccttaattgaagaatcgaaaaccagcaagaaaagaatgaacaagaattattggaattagataaatgggc  
 2100  
 3' ttaattgttaatgtgttcgaattatgtgaggaattaacttcttagcgttttggctcttcttcttacttgttcttaataaccttaacttattaccgg  
 HIV RRE

p201 (pPRIME-CMV-GFP-FF3)

5' aagtttggtgaattggtttaacataacaaattggctgtggtatataaaattattcataatgatagtaggagcttggtaggttaagaatagtttttggct 2200  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' ttcaaacaccttaaccaaattgtattgtttaaccgacaccatataatttaataagtagtactatcatcctccgaaccatccaaattcttatcaaaaacga  
 HIV RRE

5' gtactttctatagtgaaataggttaggcagggatattcaccattatcgtttcagaccacctccaaccccgaggggaccccgacagggcccgaaggaatag 2300  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' catgaaagatataccttatctcaatccgtccctataagtggtaatagcaaaagctgggtggagggttggggctcccctgggctgtccgggcttccctatc  
 HIV RRE

5' aagaagaaggtggagagagagacagagacagatccattcgattagtgaaaggatcggcactcgtgcgccaattctgcagacaaatggcagttatcatcc 2400  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' ttcttctccaacctctctctgtctctgtctaggaagctaataccttgcctagccgtgacgcacgcggttaagacgtctgtttaccgtcataagtagg  
 HIV RRE

5' acaattttaaagaaaaggggggattgggggtacagtgaggaaagaatagtagacataatagcaacagacatacaaaactaagaattacaaaaaca 2500  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' tgttaaattttctttccccctaacccccatgacagtcaccttcttatcatctgtattatcgttctgtatgtttgatttcttaagttttgt  
 Apal PspOMI XbaI NsiI

5' aattacaaaaattcaaaatttcgggtttattacagggacagcagagatccagtttggtagtagccggcccgctctagacgtattaccgccaatgcatta 2600  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' ttaatgttttaagttttaaagcccaataatgtccctgtcgtctctaggtcaaaccaatcatggcccgggcgagatctgcataatggcggtagcgaat  
 CMV

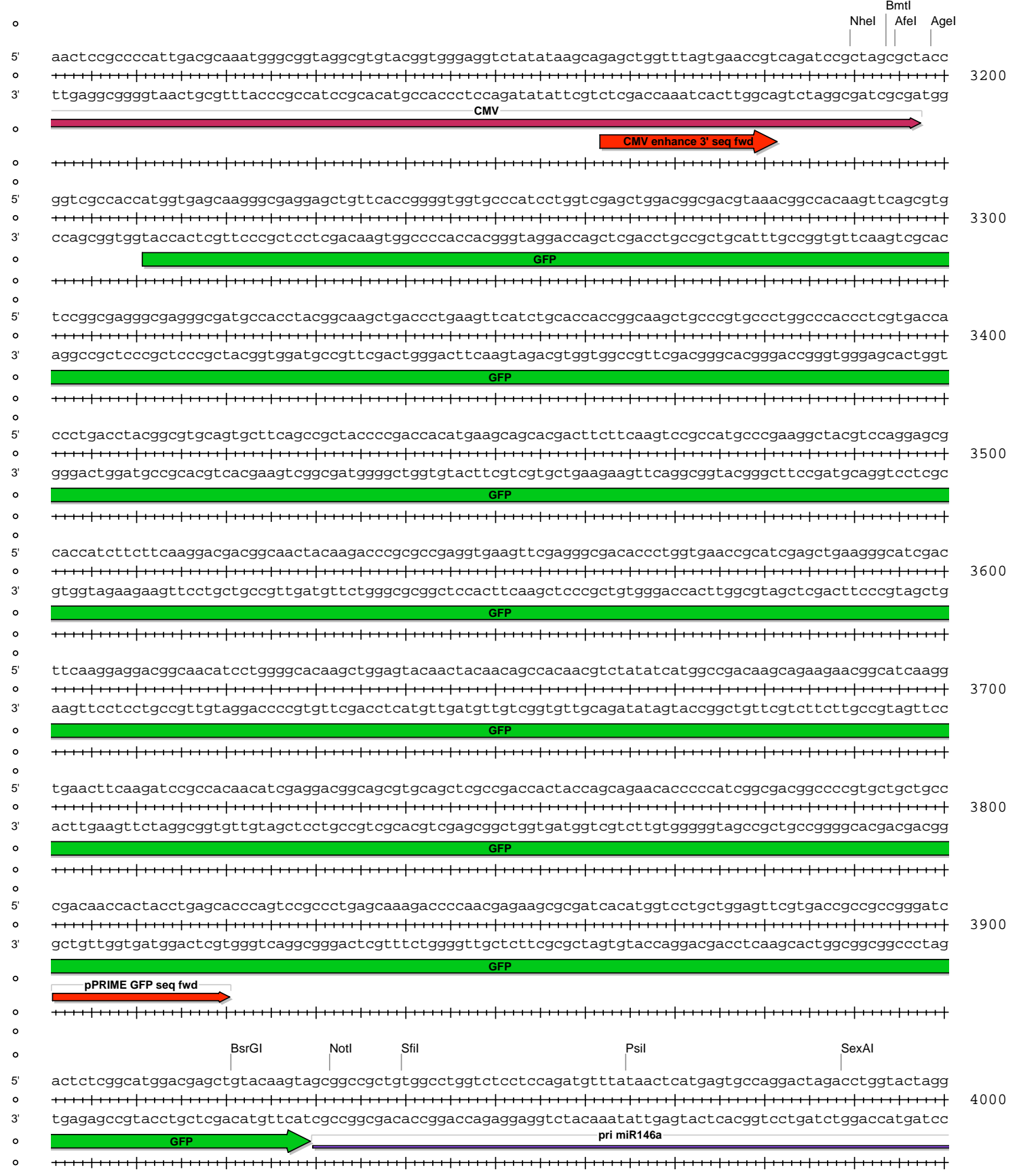
5' gttattaatagtaatacaattacgggggtcattagttcatagccatataatggagttccgcgttacataacttacggtaaatggcccgcctggctgaccgcc 2700  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' caataattatcattagtaatagccccagtaatacaagatcgggtatatacctcaaggcgcaatgtattgaatgccatttaccgggaggaccgactggcgg  
 CMV

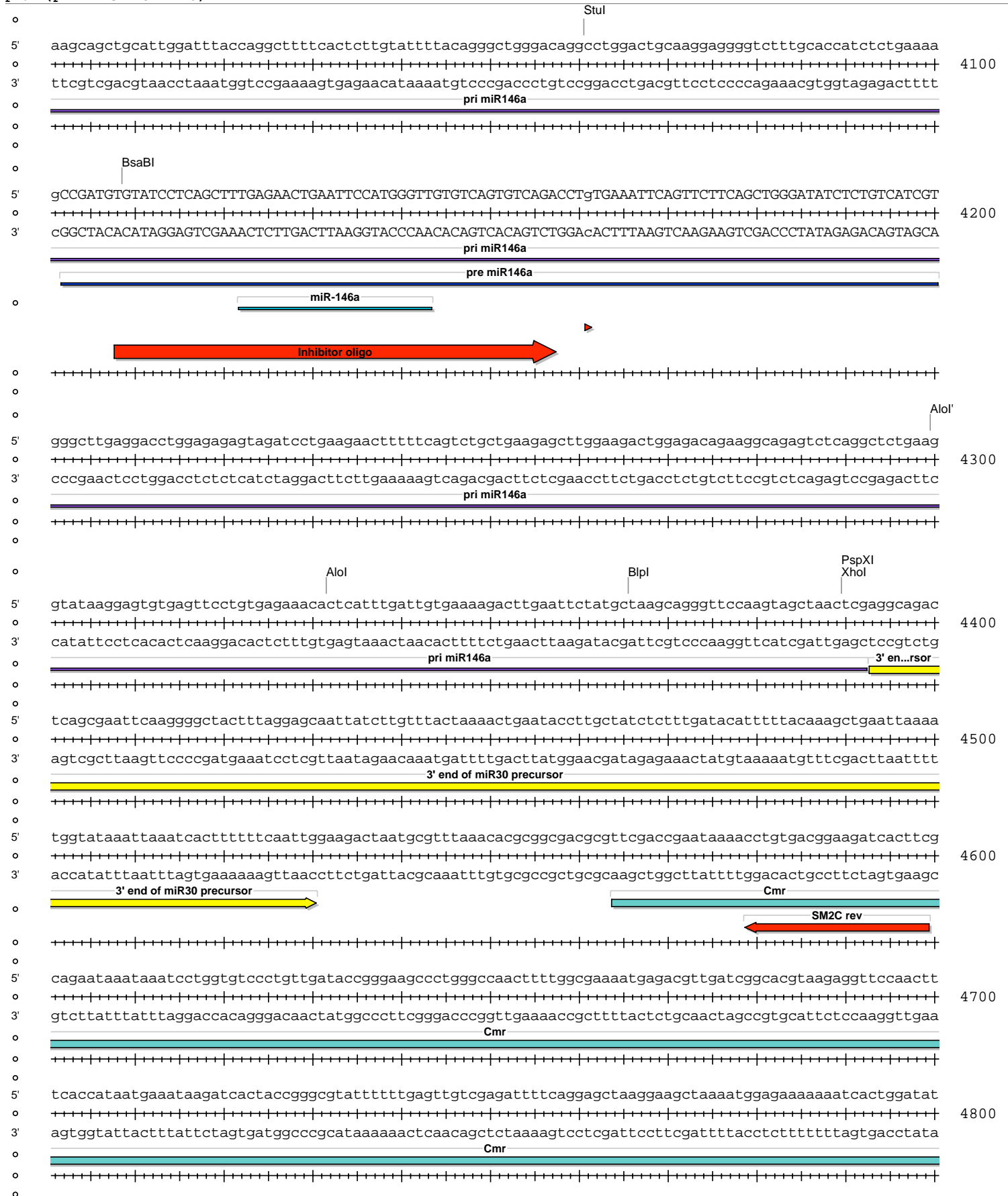
5' caacgacccccgccattgacgtcaataatgacgtatgttccatagtaacgccaatagggactttccattgacgtcaatgggtggagatattacggtaa 2800  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' gttgctggggcgggtaactgcagttattactgcatacaagggtatcattcgggttaccctgaaaggtaactgcagttaccacctcataaatgccatt  
 CMV

5' actgccacttggcagtagcatcaagtgtatcatatgccagtagccccctattgacgtcaatgacggtaaatggcccgcctggcattatgccagtagaca 2900  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' tgacgggtgaaccgtcatgtagttcacatagtagtaccggtcagtcgggggataactgcagttactgccatttaccgggaggaccgtaatacgggtcatgt  
 CMV

5' tgaccttatgggactttcacttggcagtagcatctacgtattagtcacgctattaccatggtagcgggtttggcagtagcatcaatgggctgggata 3000  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' actggaataccctgaaaggatgaaccgtcatgtagatgcataatcagtagcgataatggtaccactacgcaaaaccgtcatgtagttaccgcacctat  
 CMV

5' gcggtttgactcacggggatttccaagctccacccattgacgtcaatgggagtttgttttggcaccaaaatcaacgggactttccaaaatgtcgtaac 3100  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' cgccaaactgagtgcccctaaagggtcagaggtggggtaactgcagttaccctcaacaaaaccgtggttttagttgcctgaaagggttttacagcattg  
 CMV





p201 (pPRIME-CMV-GFP-FF3)

5' accaccggttgatataatcccaatggcatcgtaaagaacattttgaggcatttcagtcagttgctcaatgtacctataaccagaccgttcagctggatatta  
 o ++++++  
 3' tgggtggcaactatataagggttaccgtagcattttctgtaaaactccgtaaagtcagtcacagagttacatggatattggtctggcaagtgcacctataat  
 o  
 o  
 o  
 o  
 5' cggcctttttaagaccgtaaagaaaaataagcacaagttttatccggcctttattcacattcttgcccgcctgatgaatgctcatccggaattacgtat  
 o ++++++  
 3' gccggaaaaatcttggcatttctttttattcgtgttcaaaataggccggaataagtgtagaacggggcgactacttacgagtaggccttaatgcata  
 o  
 o  
 o  
 o  
 5' ggcaatgaaagaccggtgagctggtgatatgggatagtggtcacccttgttacaccgttttccatgagcaaaactgaaacgttttcatcgctctggagtga  
 o ++++++  
 3' ccgttactttctgccactcgaccactataccctatcacaagtgggaacaatgtggcaaaaggtactcgtttgactttgcaaaagtagcgagacctcact  
 o  
 o  
 o  
 o  
 5' taccacgacgatttccggcagtttctacacataatcgcgaagatgtggcgtgttacggtgaaaacctggcctatttccctaaagggtttattgagaata  
 o ++++++  
 3' atggtgctgctaaaggccgtcaagatgtgtatataagcgttctacaccgcacaatgccacttttgaccggataaagggtttcccaataactcttat  
 o  
 o  
 o  
 o  
 5' tgttttctgtctcagccaatccctgggtgagtttcaccagtttgatttaaacgtggccaatatggacaacttcttcgccccggttttcaccatgggcaa  
 o ++++++  
 3' acaaaaagcagagtcggttagggaccactcaaagtggcctcaaaactaaatttgaccgggtataacctgtgaagaagcgggggcaaaagtggtaccggt  
 o  
 o  
 o  
 o  
 5' atattatacgcaaggcgacaaggtgctgatgccgctggcgattcaggttcatcatgcccgtttgtgatggcttccatgtcggcagaatgcttaatgaatta  
 o ++++++  
 3' tataatatgctgctccgctgttccacgactacggcgaccgctaagtccaagttagtacggcaaacactaccgaaggtacagccgtcttacgaattactta  
 o  
 o  
 o  
 o  
 5' caacagtactgcatgagtggtggcagggcggggcgttaatttttttaaggcagttattgggtgcccttaaaccgctgggtgctacgcctgaataagtataata  
 o ++++++  
 3' gttgcatgacgctactcaccgtcccggccccgcatataaaaaattccgtcaataaccacgggaatttgcggaccaacgatgctggacttattcactattat  
 o  
 o  
 o  
 o  
 5' agcggatgaatggcagaaattcggatctcgaccggtttggcggtggctccctgccacgcggtccgaacagaagctgatctccaagaggatctgaca  
 o ++++++  
 3' tcgcctacttaccgtcttaagcctagagctggcgcaaaccccgccaccgagggacggtgcgccgaggcttgtcttcgactagaggcttctcctagactgt  
 o  
 o  
 o  
 o  
 5' tgtgtttaaacctcgacttaattaagtcgagggctcgacggtatcgataagctcgcttcacgagatcatgtttaaggggtccgggtccactaggtacaatt  
 o ++++++  
 3' acacaaaattggagctgaattaattcagctcccagctgccatagctattcgagcgaagtgtcttagtacaattccaaggccaaggtgatccatgttaa  
 o  
 o  
 o  
 o  
 5' cgatatcaagcttatcgataatcaacctctggattacaaaatttgtaaagattgactggatattcttaactatgttgctccttttacgctatgtggatac  
 o ++++++  
 3' gctatagttcgaatagctattagttggagacctaatgttttaaacactttctaactgaccataagaattgatacaacgagggaaaaatgcgatacacctatg  
 o  
 o  
 o  
 o

Cmr

Cmr

Cmr

Cmr

MscI

Cmr

Cmr

Cmr

Cmr

PciI

Cmr

PacI

WRE



p201 (pPRIME-CMV-GFP-FF3)

5' gctgctttaatgcctttgtatcatgctattgcttcccgatggctttcattttctcctccttgataaatcctgggtgctgtctctttatgaggagtgt  
 3' cgacgaaattacggaaacatagtagcataacgaagggcataccgaaagtaaaagaggaggaacatattaggaccaacgacagagaataactcctcaaca

WRE

5900

5' ggcccgttgtcaggcaacgtggcgtggtgtgactgtgtttgctgacgcaacccccactgggtggggcattgccaccacctgtcagctcctttccgggac  
 3' ccgggcaacagtcctgtgaccgcaccacacgtgacacaaacgactgcggtgggggtgaccaaccccgtaacgggtggtagcagtcgaggaaggccctg

WRE

6000

5' tttcgctttccccctccctattgccacggcggaactcatcgccgctgccttgcccgtgctggacaggggctcggctgttgggactgacaattccgtg  
 3' aaagcgaagggggagggataacgggtgccgccttgagttagcggcgagcggaaacggggcgacgacctgtccccgagccgacaacccgtagctgttaaggcac

WRE

6100

5' gtgttgtcggggaaatcatcgtcctttccttggtgctgcctgtgtgccacctggattctgcggggacgtccttctgctacgtcccttcggccctca  
 3' cacaacagcccttagtagcaggaaaggaaccgacgagcggacacacacggtagacctaaagcgcgcctgcaggaagacgatgcaggaagccgggagt

WRE

6200

SacII

5' atccagcggaccttcttccccgggctgctgccggctctgcccctcttccgctcttcgacctcagacctcagacgagtcggatctcctttgggcccgc  
 3' taggtcgcctggaaggaggggcgccggacgacgcccggagacgcccggagagcggcggagaaagcgaagcggagcgtgctcagcctagagggaaacccggcg

WRE

6300

5' ctccccgcatcgataccgtcgacctcgatcgagacctagaaaaacatggagcaatcacaagtagcaatacagcagctaccaatgctgattgtgctggct  
 3' gaggggcgtagctatggcagctggagctagctctggatcttttgtagctcgttagtgttcacgcttatgctcgtcgatggttacgactaacacggaccga

WRE

LTR

6400

5' agaagcacaagaggaggaggagggttttccagtcacacctcaggtaccttaagaccaatgacttacaaggcagctgtagatcttagccacttttta  
 3' tcttcgtgttctcctcctcctccacccaaaaggtcagtgaggagccatggaaatctcggtagctgaatgtccgctcgacatctagaatcgggtgaaaaat

WRE

LTR

6500

5' aaagaaaaggggggactggaagggttaattcactcccaacgaagacaagatatccttgatctgtggatctaccacacacaaggctacttccctgattggc  
 3' tttctttccccctgaccttcccgatgaagtgagggtgcttctgttctataggaactagacacctagatggtgtgtgttccgatgaagggactaacgg

WRE

LTR

6600

5' agaactacacaccagggccagggatcagatatccactgaccttggatggtgctacaagctagtagtaccagttgagcaagagaaggtagaagaagccaatga  
 3' tcttgatgtgtggtcccggtccctagctataggtgactggaaacctaccacgatgttcgatcatggtcaactcgttcttccatcttcttcggttact

WRE

LTR

6700

5' aggagagaacaccgcttgttacaccctgtgagcctgcatgggatggatgaccggagagagaagtattagagtggaggttgacagccgcttagcattt  
 3' tcctctcttggggcaacaatgtggggacactcggacgtaccctacctactgggctctctcttcataatctcacctccaaactgtcggcggtatcgtaaa

WRE

LTR

6800

p201 (pPRIME-CMV-GFP-FF3)

5' catcacatggccccgagagctgcatccggactgtactgggtctctctgggttagaccagatctgagcctgggagctctctggctaactaggaacccactgc  
 o ++++++ 6900  
 3' gtagtgtaccgggctctcgacgtaggcctgacatgaccagagagaccaatctggtctagactcggaccctcgagagaccgattgatcccttgggtgacg  
 o LTR  
 o ++++++  
 o ++++++

5' ttaagcctcaataaagctgacctgagtgttcaagtagtgtgtgccctctggtgtgactctggtaactagagatccctcagacccttttagtcagt  
 o ++++++ 7000  
 3' aattcggagttatctcgaacggaactcacgaagttcatcacacacgggcagacaacacactgagaccattgatctctagggagctctgggaaaaatcagtc  
 o LTR  
 o ++++++  
 o ++++++

5' gtggaaaatctctagcagcatgtgagcaaaaggccagcaaaaggccaggaaccgtaaaaaggccgcgttctgctggcggttttccataggctccgccccct  
 o ++++++ 7100  
 3' caccttttagagatcgtcgtacactcgttttccggctcgttttccggctccttggcatttttccggcgcaacgaccgcaaaaaggatccgagggggggga  
 o LTR  
 o ++++++  
 o ++++++

DrdI

5' gacgagcatcacaaaaatcgacgctcaagttagaggtggcgaaccccgacaggactataaagataaccaggcgtttccccctggaagctccctcgtgcgct  
 o ++++++ 7200  
 3' ctgctcgtagtgttttagctcgcaggttcagctccaccgctttgggctgtcctgatatttctatggtccgcaaagggggaccttcgagggagcacgcga  
 o ++++++

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 o ++++++ 7300  
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