

Absent Sites	0	AarI, AbsI, Alfi, AlfI', Alol, Alol', AscI, AvrII, BaeI, BaeI', BamHI, BarI, BarI', BclI, BplI, BmgBI, BsaBI, BsiWI, BsrGI, BstBI, BstEII, BstXI, BstZ17I, FspAI, HpaI, MauBI, MreI, PmlI, PstI, PspXI, PstI, PstI', SbfI, SexAI, SfiI, SgrAI, SmaI, SphI, SrfI, StuI, SwaI, TstI, TstI', XcmI, XhoI, XmaI
Acc65I	1	6296
AfeI	1	3195
AgeI	1	3199
AhdI	1	7761
AjuI	1	3927
AjuI'	1	3895
AleI	1	1920
ApaI	1	2572
AsiSI	1	3578
BbeI	1	984
BbvCI	1	1767
BcgI	1	8266
BcgI'	1	8300
BmtI	1	3194
BspMI	1	3527
BssHII	1	1054
Bsu36I	1	6292
EcoNI	1	1513
EcoO109I	1	2277
FseI	1	1491
FspI	1	7983
KasI	1	980
KpnI	1	6300
MscI	1	5107
NarI	1	981
NheI	1	3190
NotI	1	4241
NsiI	1	2598
PacI	1	5472
PciI	1	5448
PfoI	1	5843
PpuMI	1	2277
PshAI	1	3241
PspOMI	1	2568
RsrII	1	3622
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' cagctgcctagccctctagagggctaggggataccacgtgagagtcattgtagacgagactacggcgtatcaattcgggtcatagacgagggacgaacaca
 +

5' gttggaggtcgctgagtagtgcgcgagcaaaathtaagctacaacaaggcaaggcttgaccgacaattgcatgaagaatctgcttaggggttaggcgttt
 200
 3' caacctccagcgactcatcacgcgctcgttttaaattcgatggtgttccgttccgaactggctgtaacgtacttcttagacgaatccaatccgcaaaa
 +

Spel

5' gcgctgcttcgogatgtacgggcccagatatacgcgcttgacattgattattgactagttattaatagtaatacaattacgggggtcattagttcatagcccat
 300
 3' cgcgacgaagcgctacatgcccggctctatatgcgcaactgtaactaataactgatcaataattatcattagttaatgcccagtaatacaagtatcgggta
 +

5' atatggagttccgcttacataaacttacggtaaatggcccgcctggctgaccgcccacgacccccgccattgacgtcaataatgacgtatgttcccat
 400
 3' tatacctcaaggcgcaatgtattgaatgccatttacggggcggaccgactggcgggtgctggggcgggtaactgcagttattactgcatacaagggt
 +

5' agtaacgccaatagggactttccattgacgtcaatgggtggagatattacggtaaaactgcccaacttggcagtacatcaagtgtatcatatgccaaagtacg
 500
 3' tcatgcggttatccctgaaaggtaactgcagttaccacactcataaatgccattgacgggtgaaccgtcatgtagttcacatagatacggttcatgc
 +

5' cccctattgacgtcaatgacggtaaatggcccgcctggcattatgccagtagacattatgggactttcctacttggcagtagacatctacgtattag
 600
 3' gggggataactgcagttactgcccattaccggggcggaccgtaatacgggtcatgtactggaataccctgaaaggatgaaccgtcatgtagatgcataatc
 +

5' tcatcgctattaccatgggtgatgcgggttttggcagtagacatcaatgggcgtggatagcgggttgactcacggggatttccaagtctccacccattgacgt
 700
 3' agtagcgataatggtaccactacgcaaaaaccgtcatgtagttaccgcacactatcgccaaactgagtgcccctaaagggttcagaggtgggtaactgca
 +

5' caatgggagttgttttggcaccaaaatcaacgggactttccaaaatgtcgtacaactccgccccattgacgcaaatggcggttaggcgtgtacgggtg
 800
 3' gttaccctcaaacaaaaccgtggttttagttgcctgaaagggttttacagcattggtgagggcgggtaactgcgtttaccggccatccgcacatgccacc
 +

5' gaggtctatagaccagatctgagcctgggagctctctggctaactaggaaccactgcttaagcctcaataaagcttgcttagtgctcaagtagtg
 900
 3' ctccagatatctggctagactcggaccctcgagagaccgattgatccctgggtgacgaattcggagttatttgaacggaactcacgaagttcatcac
 +

LTR

KasI
 NarI
 SfoI
 BbeI

5' tgtgccgctctgttgtgtgactctggtaaactagagatccctcagacccttttagtcagtggtgaaaaatctctagcagtgggcggccgaacagggacttgaa
 1000
 3' acacgggcagacaacacactgagaccattgatctctagggagctctgggaaaaatcagtcacaccttttagagatcgtcaccgcgggcttgcctcctgaactt
 +

LTR

BssHII

5' agcgaagggaaccagaggagctctctcgacgcaggactcggcttgcctgaagcgcgcacggcaagaggcgagggggcggcactggtgagtagcgcacaaa
 1100
 3' tcgctttcccttggctcctcagagagagctgcgctcctgagccgaacgacttcgcgcgctgcccgttctccgctccccgcccgtgaccactcatgcggtttt
 +

LTR

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5' attttgactagcggaggctagaaggagagagatgggtgcgagagcgtcagtattaagcgggggagaattagatcgcgatgggaaaaattcgggtaaggc
 1200
 3' taaaactgatcgctccgatcttctctctctaccacgctctcgcagtcataattcgccccctcttaactctagcgctaccctttttaagccaattccg
 LTR

5' caggggaaagaaaaatataataaacatatagtagggcaagcaggagctagaacgattcgcagttaatcctggcctgtagaaacatcagaaggct
 1300
 3' gtccccctttctttttatattttgtatatcataccggttcgctcctcgatcttgtaagcgtcaattaggaccggacaactcttgtagtcttccga
 LTR

5' gtagacaaatactgggacagctacaaccatcccttcagacaggatcagaagaacttagatcattatataatacagtagcaaccctctattgtgtgcatca
 1400
 3' catctgtttatgacctgtcgatgttgtaggaagtctgtcctagtctcttgaatctagtaatatattatgtcatcgtgggagataacacacgtagt
 LTR

5' aaggatagagataaaagacaccaaggaagcttttagacaagatagaggaagagcaaaacaaaagtaagaccaccgcacagcaagcggccggccgctgat
 1500
 3' ttctatctctatcttctgtggttccttcgaaatctgttctatctccttctcgtttcttctcattctggtggcgtgctcgttcgccggccggccgacta
 LTR
 SapI FseI

5' cttcagacctggaggaggagatgagggacaattggagaagtgaattatataaataaaagtagtaaaaattgaaccattaggagtagcaccaccaag
 1600
 3' gaagtctggacctcctcctctatactcctgtaacctctcacttaatatattatattcatcatttttaacttggtaatcctcatcgtgggtggttc
 LTR HIV RRE
 EcoNI

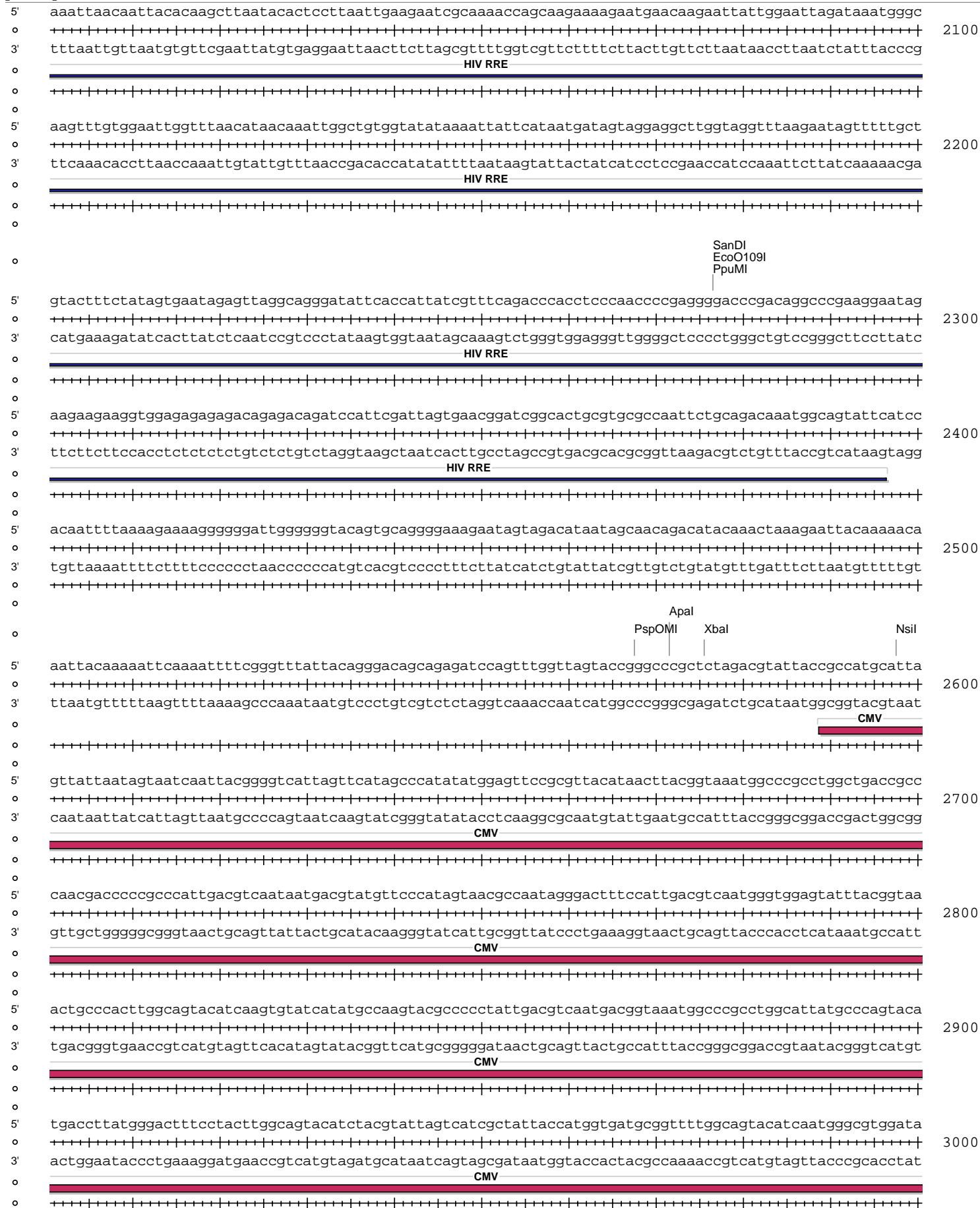
5' gcaaagagaagagtggcagagagaaaaagagcagtggaataggagcttggctccttgggttcttgggagcagcaggaagcactatgggcgcagcgt
 1700
 3' cgtttctctcaccacgctctctcttttctcgtcacccttatcctcgaacaaggaaccaagaaccctcgtcgtcctcgtgatacccgctcgca
 HIV RRE

5' caatgacgctgacggtacaggccagacaattatgtctggtatagtcagcagcagaacaatttgctgagggctattgaggcgcaacagcatctgttgca
 1800
 3' gttactgcgactgccatgtccggtctgtaataacagaccatatcacgctcgtcgtcttgtaaacgactcccgataactccgctgtcgttagacaacgt
 HIV RRE
 BbvCI

5' actcacagtctggggcatcaagcagctccaggcaagaatcctggctgtgaaagatacctaaaggatcaacagctcctggggattggggtgctctgga
 1900
 3' tgagtgtcagacccttagtctcgtcgaggtccgttcttaggaccgacacctttctatggatttctagtgctgaggaccctaaacccaacgagacct
 HIV RRE

5' aaactcatttgaccactgctgtgccttggaaatgctagtgtgagtaataaatctctggaacagatttggaaatcacacgacctggatggagtgggacagag
 2000
 3' tttagtaaacggtggtgacgacacggaaccttacgatcaacctcattatttagagacctgtctaaaccttagtgtgctggacctacctcacctgtctc
 HIV RRE
 AclI

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p201 (pPRIME-CMV-GFP-FF3)

5' gcggtttgactcacgggatttccaagtctccacccatgacgtcaatgggagtttgttttggcaccaaaatcaacgggactttccaaaatgtcgtaac
 3' cgccaaactgagtgccctaaaggttcagaggtgggtaactgcagttaccctcaacaaaaccgtggttttagttgcctgaaaggttttacagcattg

CMV

NheI BmlI
AfeI AgeI

5' aactccgccccattgacgcaaatgggcggtaggcgtgtacggtgggaggtctatataagcagagctggttttagtgaaccgtcagatccgctagcgtacc
 3' ttgaggcgggtaactgcgtttaccgcacatccgcacatgccaccctccagatataattcgtctcgaccaaatacacttggcagctctaggcgatcgcgatgg

CMV

CMV enhancer 3' seq fwd

5' ggtATGGATAGATCCGGAAAGCCTGAACTCACCGGACGCTCTGTCTGAGAAGTTTCTGATCGAAAAGTTCGACAGCGTCTCCGACCTGATGCAGCTCTCGG
 3' ccaTACCTATCTAGGCCTTTCGGACTTGAGTGGCGCTGCAGACAGCTCTTCAAAGACTAGCTTTTCAAGCTGTTCGACAGGCTGGACTACGTCGAGAGCC

PshAI

hygromycin B phosphotransferase

5' AGGGCGAAGAATCTCGTGCTTTCAGCTTCGATGTAGGAGGGCGTGGATATGTCTCGGGTAAATAGCTGCGCCGATGGTTTCTACAAAGATCGTTATGT
 3' TCCCGCTTCTTAGAGCACGAAAGTCGAAGCTACATCTCCCGCACCTATACAGGACGCCATTTATCGACGCGGTACCAAAGATGTTTCTAGCAATACA

hygromycin B phosphotransferase

5' TTATCGGCACCTTTCATCGGCCGCGCTCCCGATTCGGGAAGTGTCTGACATTTGGGAATTCAGCGAGAGCCTGACCTATGCATCTCCCGCCGTGCACAG
 3' AATAGCCGTGAAACGTAGCCGCGCAGGGCTAAGGCCTTACGAAGTGTAAACCCCTTAAGTCGCTCTCGGACTGGATAACGTAGAGGGCGGCACGTGTC

hygromycin B phosphotransferase

BspMI

AsiSI

5' GGTGTACAGTTGCAAGACCTGCCTGAAACCGAAGTGCCTGCTGTCTGACCGCGTTCGCGGAGGCCATGGATGCGATCGCTGCGGCCGATCTTAGCCAGA
 3' CCACAGTGCAACGTTCTGGACGGACTTTGGCTTGACGGGCGACAAGACGTCGCGCCAGCGCTCOGGTACCTACGCTAGCGACGCCCGGTAGAAATCGGTCT

hygromycin B phosphotransferase

RsrII

5' CGAGCGGGTTCGGCCCATTCGGACCGCAAGGAATCGGTCAATACACTACATGGCGTGATTTTCATATGCGCGATTGCTGATCCCCATGTGTATCACTGGCA
 3' GCTCGCCCAAGCCGGTAAGCCTGGCGTTCCTTAGCCAGTTATGTGATGTACCGCACTAAAGTATACGCGCTAACGACTAGGGGTACACATAGTGACCGT

hygromycin B phosphotransferase

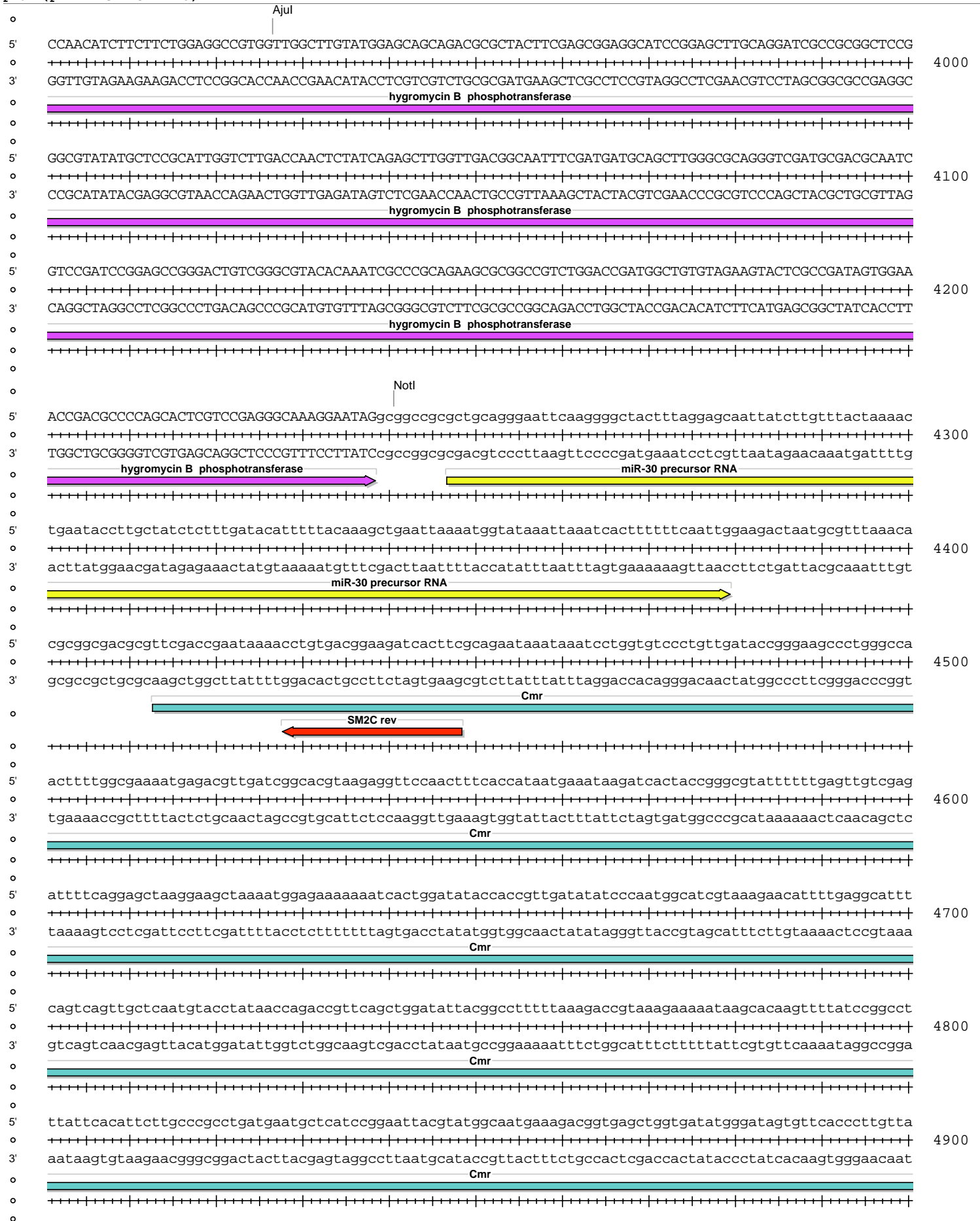
5' AACTGTGATGGACGACACCGTCAGTGCCTCGTCGCGCAGGCTCTCGATGAGCTGATGCTTTGGGCCGAGGACTGCCCGAAGTCCGGCACCTCGTGAC
 3' TTGACACTACTGCTGTGGCAGTCACGCAGGCAGCGCTCCGAGAGCTACTCGACTACGAAACCCGGCTCCTGACGGGGCTTCAGGCCGTGGAGCACGTG

hygromycin B phosphotransferase

AjuI

5' GCGGATTTCCGGCTCCAACAATGTCCTGACGGACAATGGCCGATAACAGCGGTCAATTGACTGGAGCGAGGCGATGTTCCGGGATTTCCAATACGAGGTCG
 3' CGCCTAAAGCCGAGGTTGTTACAGACTGCCTGTTACCGCGTATGTGCGCAGTAACTGACCTCGCTCCGCTACAAGCCCTAAGGGTTATGCTCCAGC

hygromycin B phosphotransferase



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