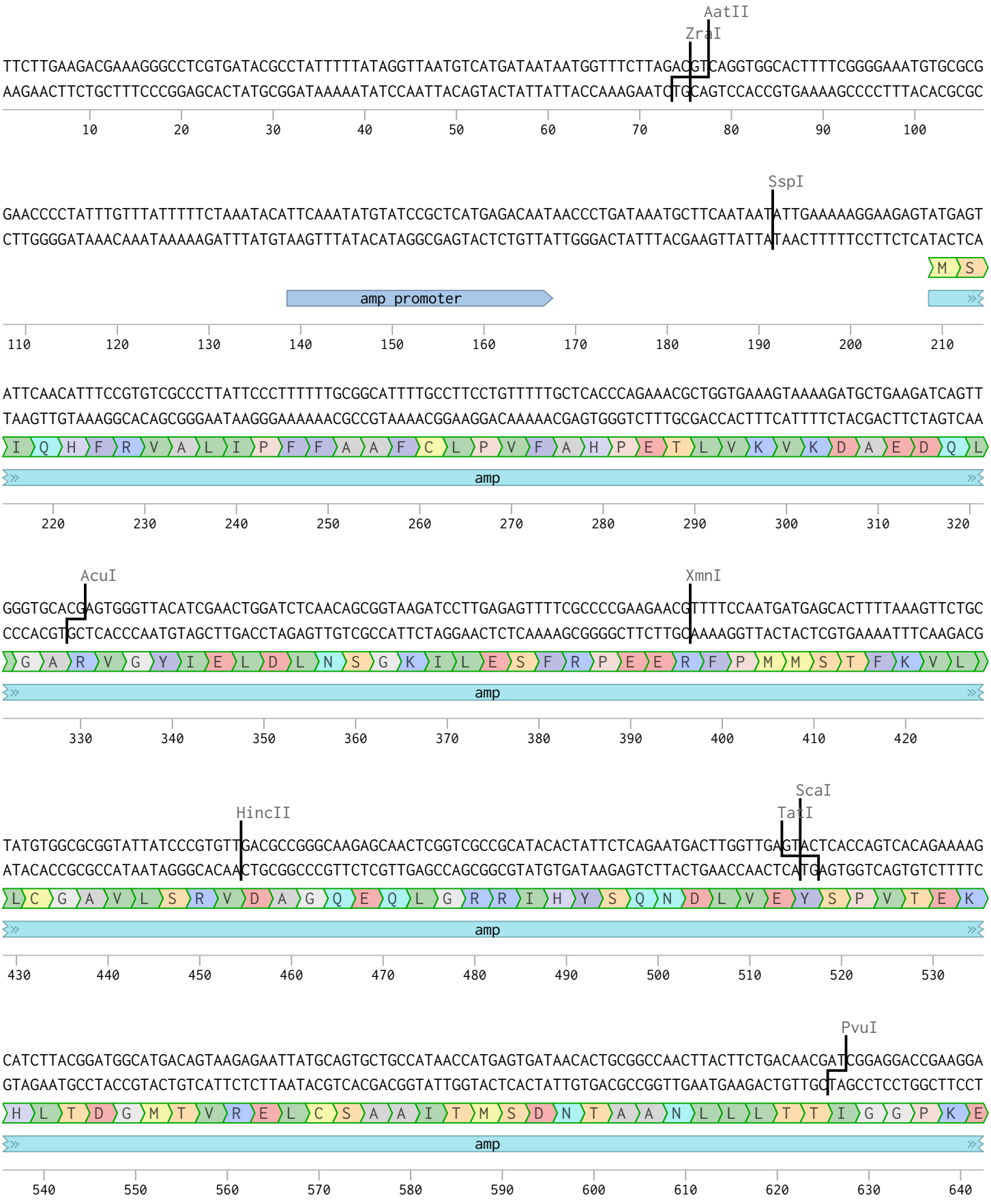
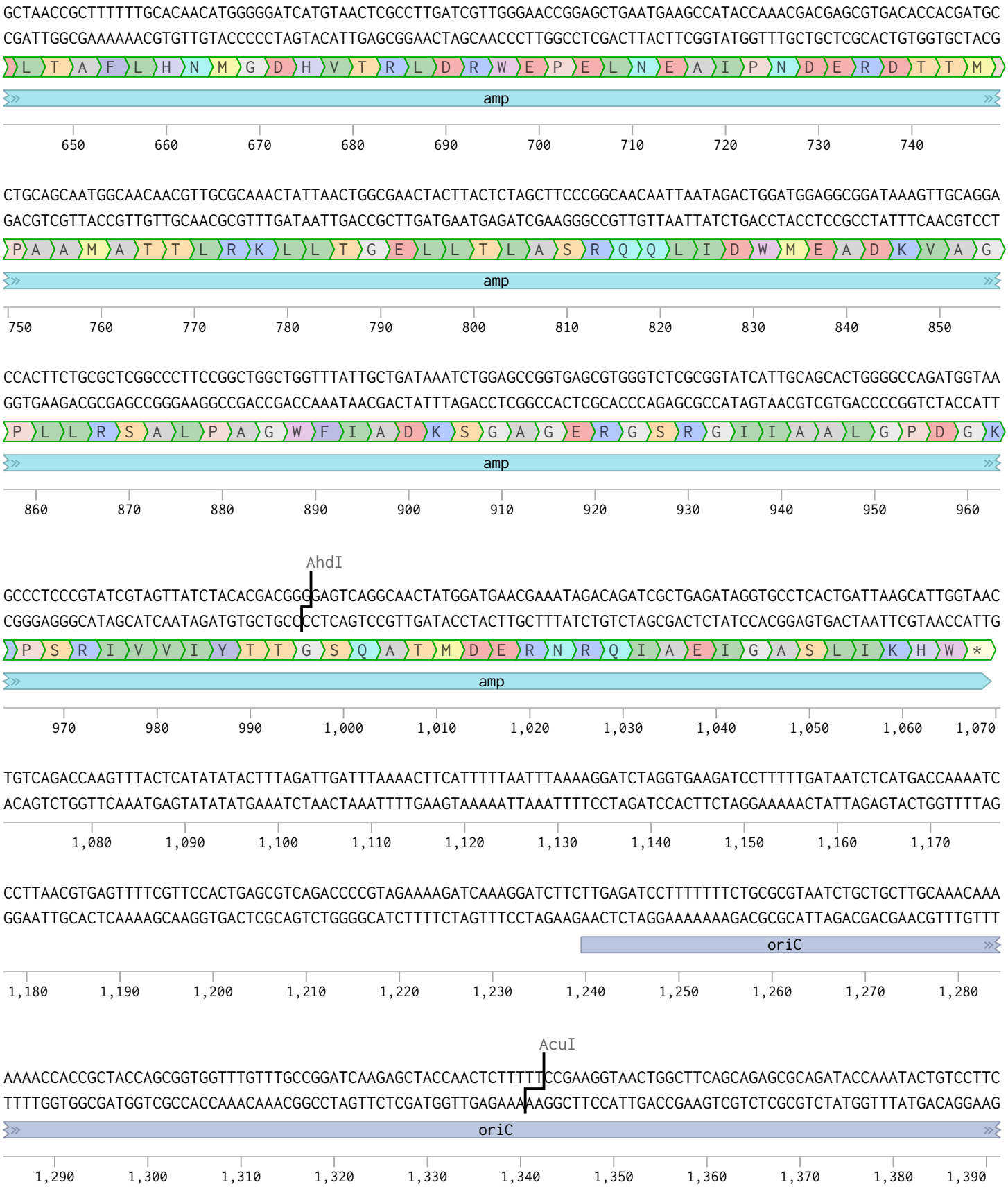
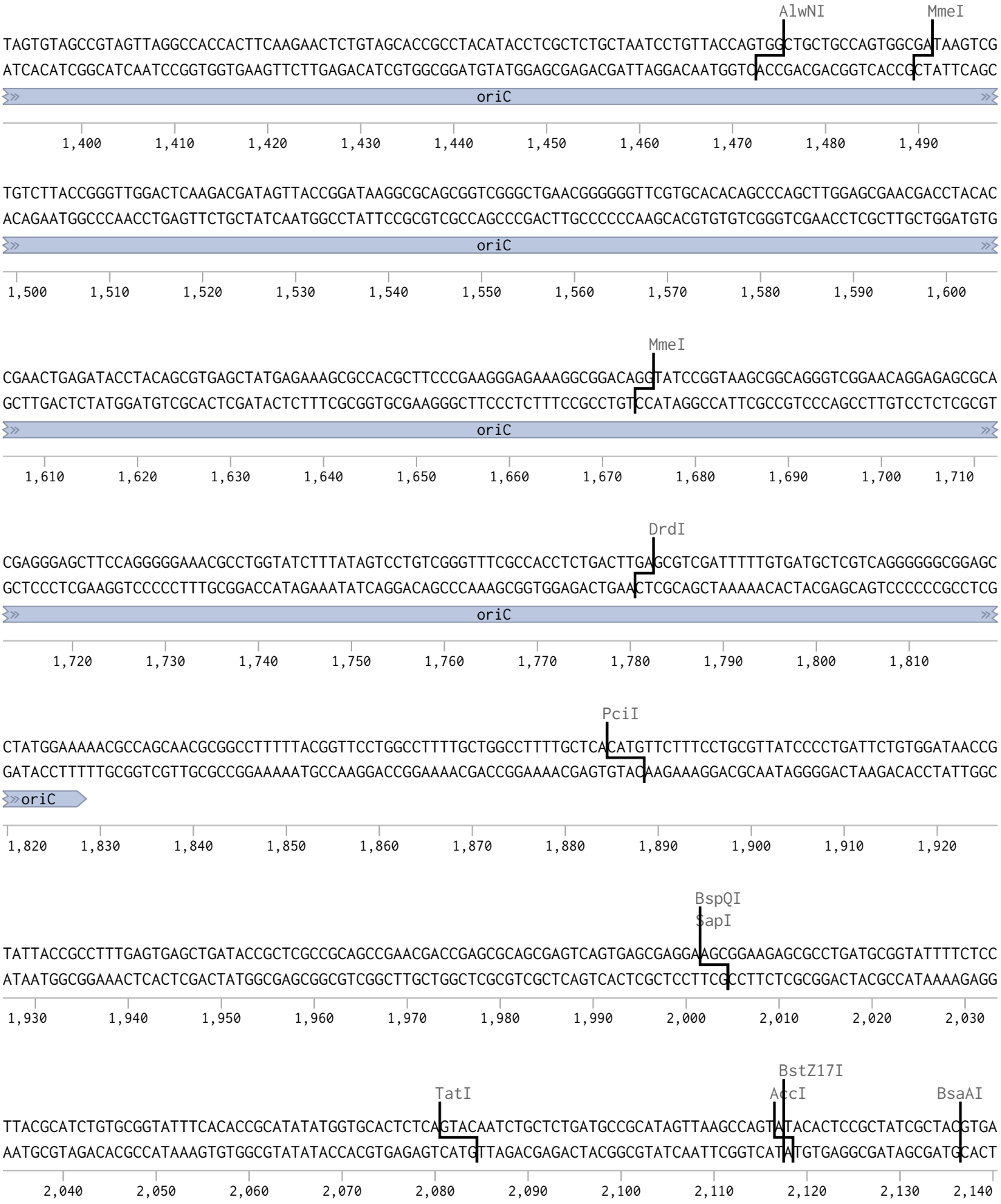
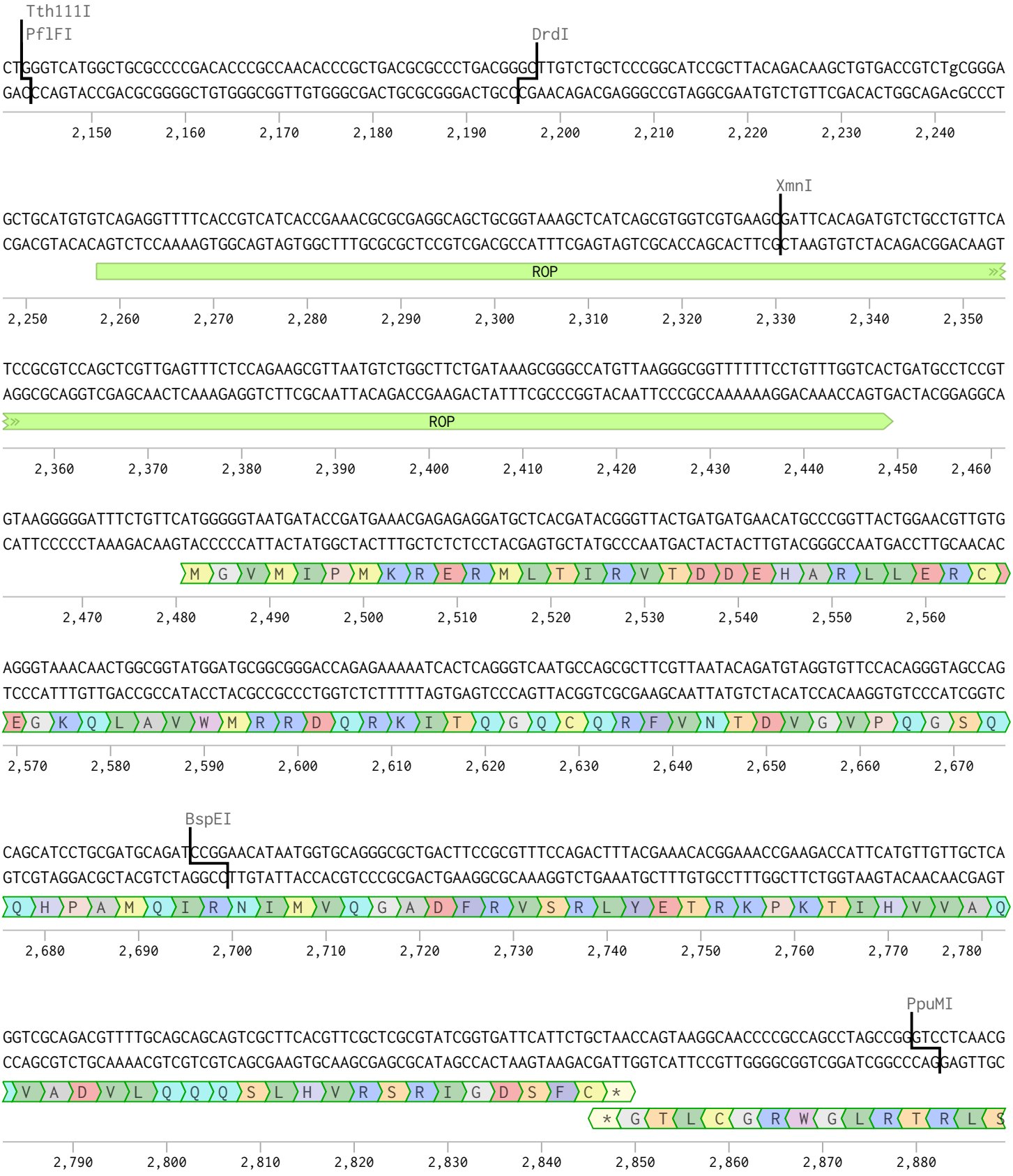
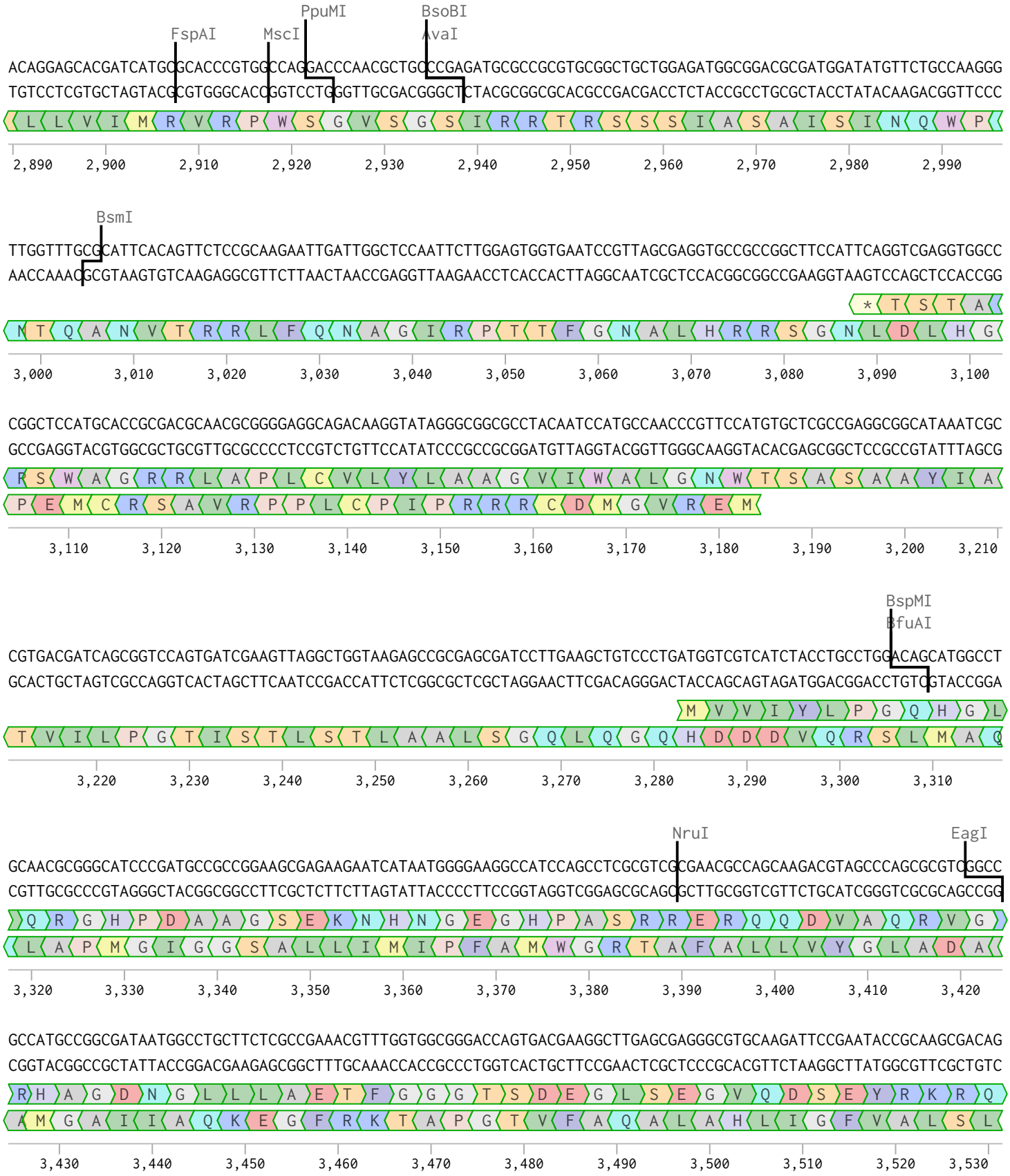
pET16b (6707 bp)

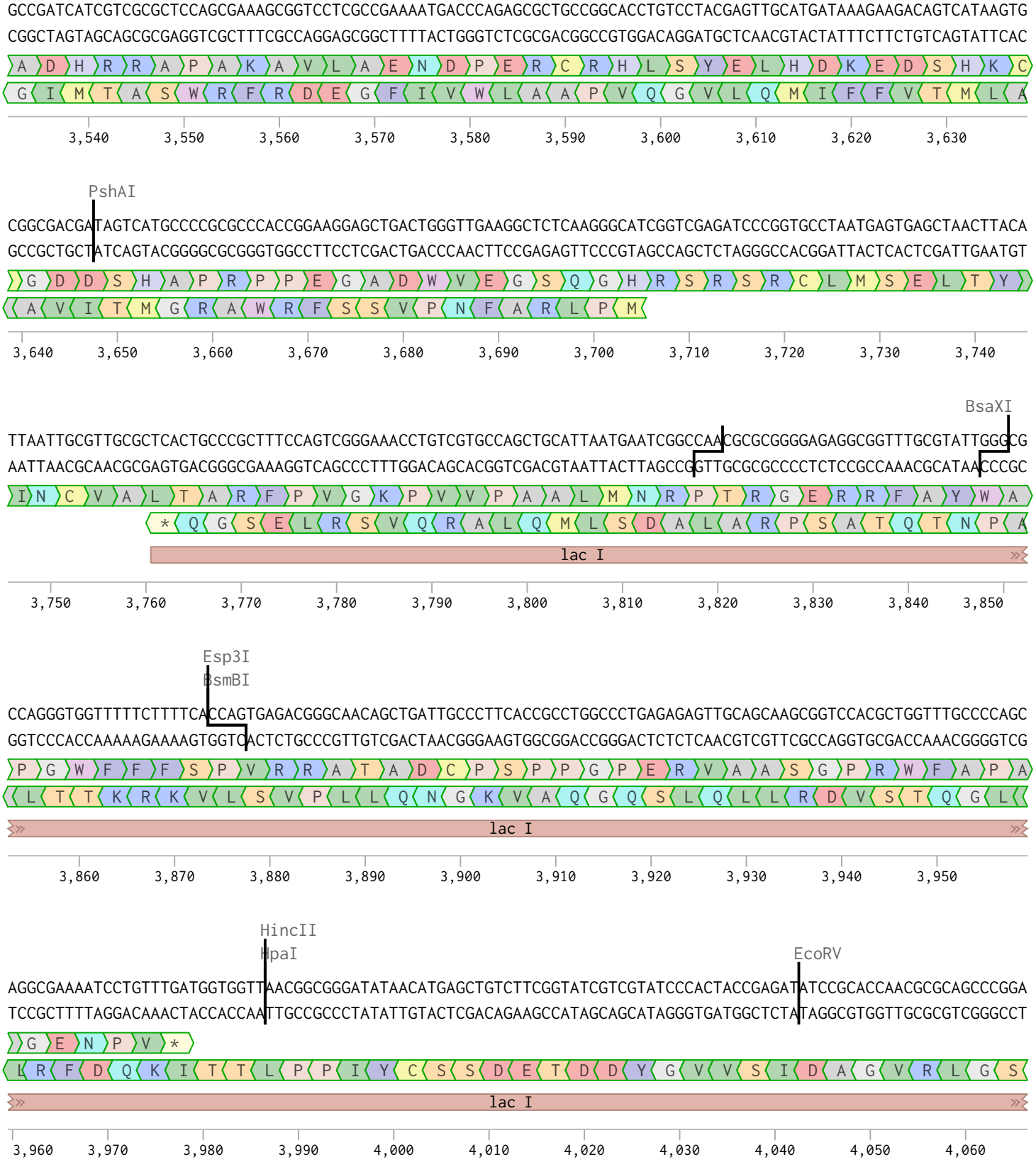


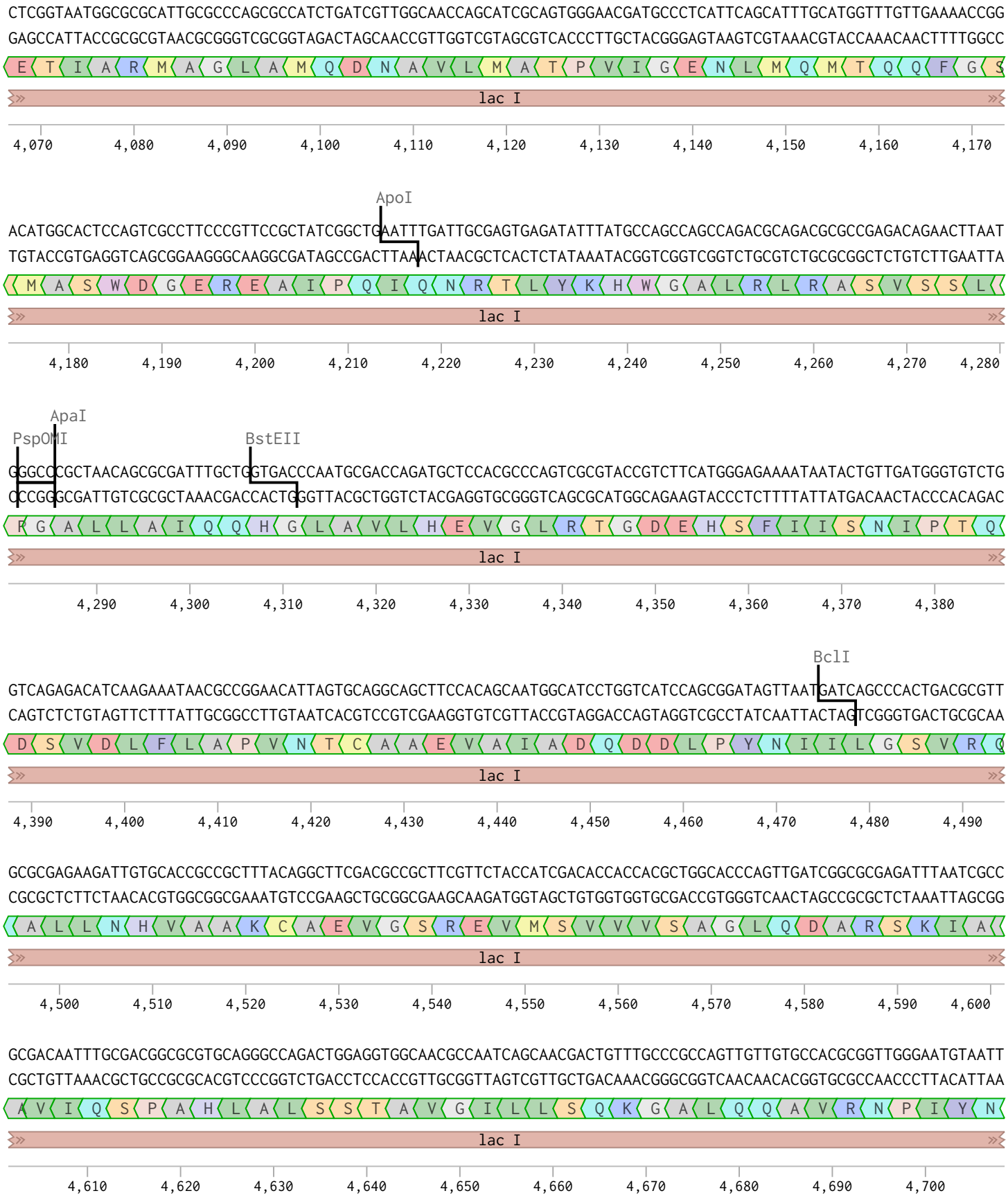

GCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACTCGCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACGATGC
CGATTGGCGAAAAAACGTGTTGTACCCCCTAGTACATTGAGCGGAACTAGCAACCCTTGGCCTCGACTTACTTCGGTATGGTTTGCTGCTCGCACTGTGGTGCTACG
L T A F L H N M G D H V T R L D R W E P E L N E A I P N D E R D T T M
amp
650 660 670 680 690 700 710 720 730 740
CTGCAGCAATGGCAACAACGTTGCGCAAACTATTAACTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGCAGGA
GACGTCGTTACCGTTGTTGCAACGCGTTTGATAATTGACCGCTTGATGAATGAGATCGAAGGGCCGTTGTTAATTATCTGACCTACCTCCGCCTATTTCAACGTCCT
P A A M A T T L R K L L T G E L L T L A S R Q Q L I D W M E A D K V A G
amp
750 760 770 780 790 800 810 820 830 840 850
CCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAA
GGTGAAGACGCGAGCCGGGAAGGCCGACCGACCAAATAACGACTATTTAGACCTCGGCCACTCGCACCCAGAGCGCCATAGTAACGTCGTGACCCCGGTCTACCATT
P L L R S A L P A G W F I A D K S G A G E R G S R G I I A A L G P D G K
amp
860 870 880 890 900 910 920 930 940 950 960
AhdI
GCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAAC
CGGGAGGGCATAGCATCAATAGATGTGCTGCCCCTCAGTCCGTTGATACCTACTTGCTTTATCTGTCTAGCGACTCTATCCACGGAGTGACTAATTCGTAACCATTG
P S R I V V I Y T T G S Q A T M D E R N R Q I A E I G A S L I K H W *
amp
970 980 990 1,000 1,010 1,020 1,030 1,040 1,050 1,060 1,070
TGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAAACTTCATTTTTAATTTAAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATC
ACAGTCTGGTTCAAATGAGTATATATGAAATCTAACTAAATTTTGAAGTAAAAATTAAATTTTCCTAGATCCACTTCTAGGAAAAACTATTAGAGTACTGGTTTTAG
1,080 1,090 1,100 1,110 1,120 1,130 1,140 1,150 1,160 1,170
CCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAA
GGAATTGCACTCAAAAGCAAGGTGACTCGCAGTCTGGGGCATCTTTTCTAGTTTCCTAGAAGAACTCTAGGAAAAAAAGACGCGCATTAGACGACGAACGTTTGTTT
oriC
1,180 1,190 1,200 1,210 1,220 1,230 1,240 1,250 1,260 1,270 1,280
AcuI
AAAACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGTCCTTC
TTTTGGTGGCGATGGTCGCCACCAAACAAACGGCCTAGTTCTCGATGGTTGAGAAAAAGGCTTCCATTGACCGAAGTCGTCTCGCGTCTATGGTTTATGACAGGAAG
oriC
1,290 1,300 1,310 1,320 1,330 1,340 1,350 1,360 1,370 1,380 1,390

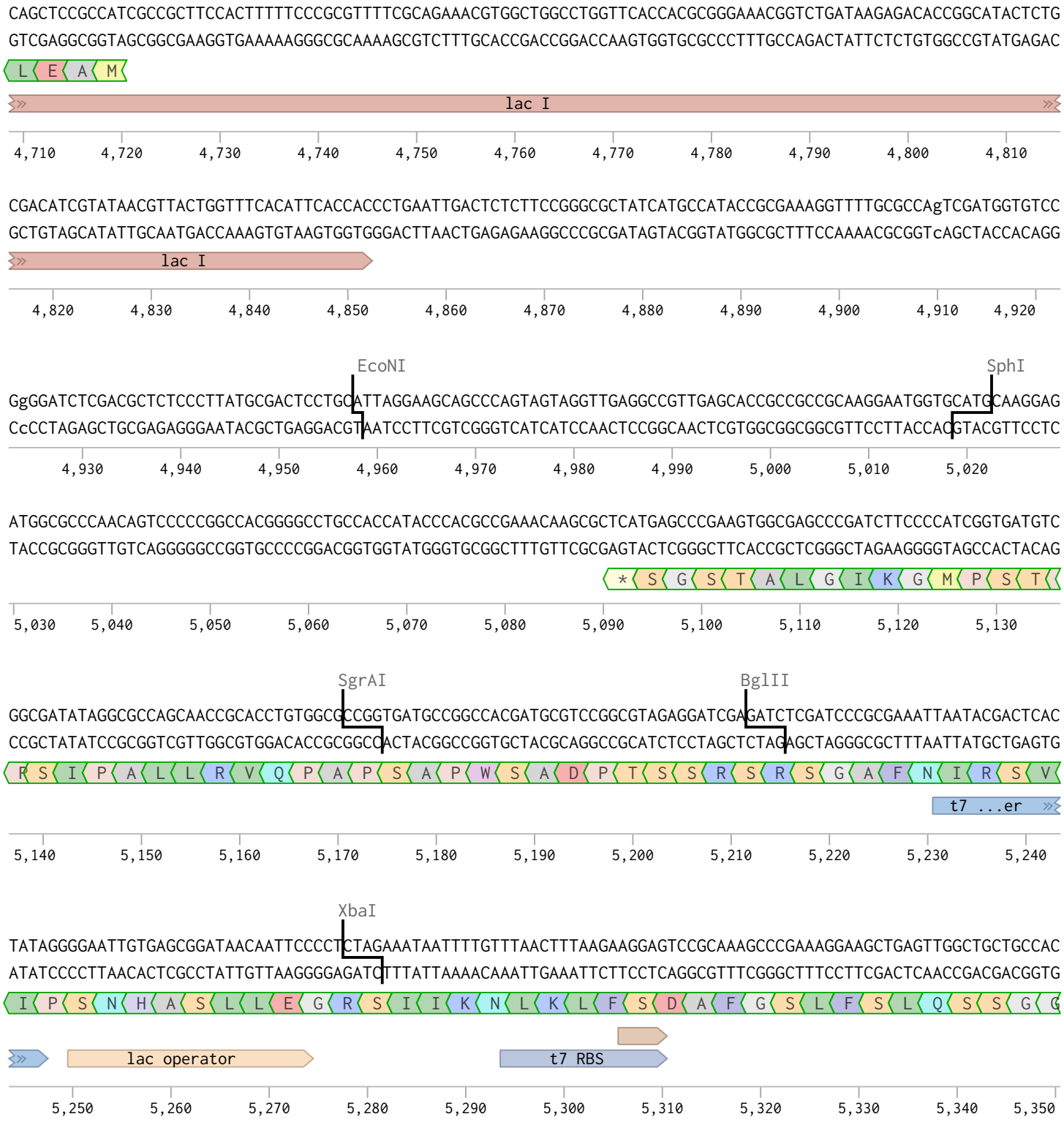

AlwNI
MmeI
TAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCG
ATCACATCGGCATCAATCCGGTGGTGAAGTTCTTGAGACATCGTGGCGGATGTATGGAGCGAGACGATTAGGACAATGGTCACCGACGACGGTCACCGCTATTCAGC
oriC
1,400 1,410 1,420 1,430 1,440 1,450 1,460 1,470 1,480 1,490
TGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACAC
ACAGAATGGCCCAACCTGAGTTCTGCTATCAATGGCCTATTCCGCGTCGCCAGCCCGACTTGCCCCCCAAGCACGTGTGTCGGGTCGAACCTCGCTTGCTGGATGTG
oriC
1,500 1,510 1,520 1,530 1,540 1,550 1,560 1,570 1,580 1,590 1,600
MmeI
CGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCA
GCTTGACTCTATGGATGTCGCACTCGATACTCTTTCGCGGTGCGAAGGGCTTCCCTCTTTCCGCCTGTCCATAGGCCATTCGCCGTCCCAGCCTTGTCCTCTCGCGT
oriC
1,610 1,620 1,630 1,640 1,650 1,660 1,670 1,680 1,690 1,700 1,710
DrdI
CGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGGAGC
GCTCCCTCGAAGGTCCCCCTTTGCGGACCATAGAAATATCAGGACAGCCCAAAGCGGTGGAGACTGAACTCGCAGCTAAAAACACTACGAGCAGTCCCCCCGCCTCG
oriC
1,720 1,730 1,740 1,750 1,760 1,770 1,780 1,790 1,800 1,810
PciI
CTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCG
GATACCTTTTTGCGGTCGTTGCGCCGGAAAAATGCCAAGGACCGGAAAACGACCGGAAAACGAGTGTACAAGAAAGGACGCAATAGGGGACTAAGACACCTATTGGC
oriC
1,820 1,830 1,840 1,850 1,860 1,870 1,880 1,890 1,900 1,910 1,920
BspQI
SapI
TATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAGCGCCTGATGCGGTATTTTCTCC
ATAATGGCGGAAACTCACTCGACTATGGCGAGCGGCGTCGGCTTGCTGGCTCGCGTCGCTCAGTCACTCGCTCCTTCGCCTTCTCGCGGACTACGCCATAAAAGAGG
1,930 1,940 1,950 1,960 1,970 1,980 1,990 2,000 2,010 2,020 2,030
BstZ17I
TatI
AccI
BsaAI
TTACGCATCTGTGCGGTATTTCACACCGCATATATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGTATACACTCCGCTATCGCTACGTGA
AATGCGTAGACACGCCATAAAGTGTGGCGTATATACCACGTGAGAGTCATGTTAGACGAGACTACGGCGTATCAATTCGGTCATATGTGAGGCGATAGCGATGCACT
2,040 2,050 2,060 2,070 2,080 2,090 2,100 2,110 2,120 2,130 2,140

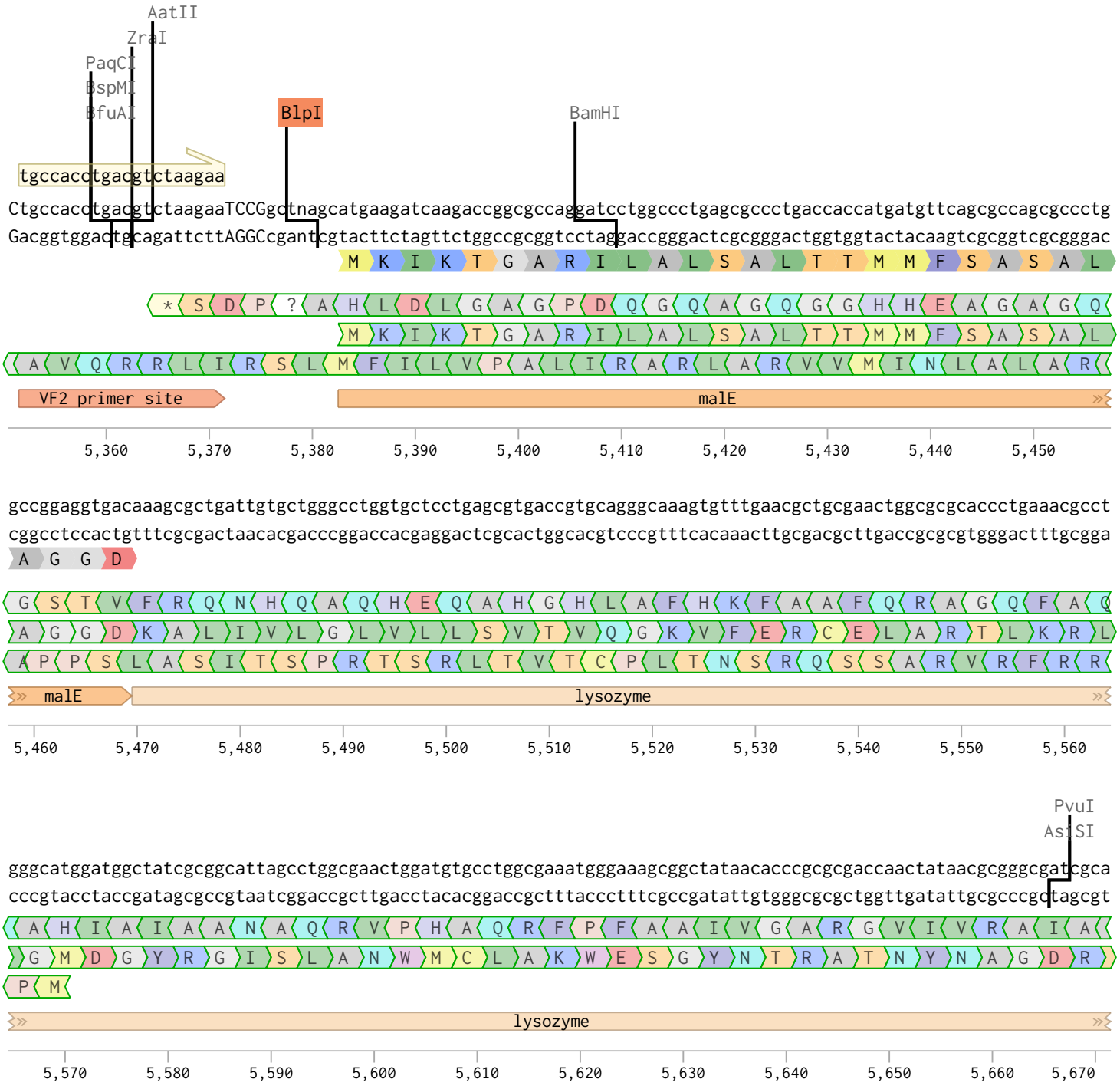

Tth111I
PflFI
DrdI
CTGGGTCATGGCTGCGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTgCGGGA
GACCCAGTACCGACGCGGGGCTGTGGGCGGTTGTGGGCGACTGCGCGGGACTGCCCGAACAGACGAGGGCCGTAGGCGAATGTCTGTTCGACACTGGCAGAcGCCCT
2,150 2,160 2,170 2,180 2,190 2,200 2,210 2,220 2,230 2,240
XmnI
GCTGCATGTGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGAGGCAGCTGCGGTAAAGCTCATCAGCGTGGTCGTGAAGCGATTCACAGATGTCTGCCTGTTCA
CGACGTACACAGTCTCCAAAAGTGGCAGTAGTGGCTTTGCGCGCTCCGTCGACGCCATTTCGAGTAGTCGCACCAGCACTTCGCTAAGTGTCTACAGACGGACAAGT
ROP
2,250 2,260 2,270 2,280 2,290 2,300 2,310 2,320 2,330 2,340 2,350
TCCGCGTCCAGCTCGTTGAGTTTCTCCAGAAGCGTTAATGTCTGGCTTCTGATAAAGCGGGCCATGTTAAGGGCGGTTTTTTCCTGTTTGGTCACTGATGCCTCCGT
AGGCGCAGGTCGAGCAACTCAAAGAGGTCTTCGCAATTACAGACCGAAGACTATTTCGCCCGGTACAATTCCCGCCAAAAAAGGACAAACCAGTGACTACGGAGGCA
ROP
2,360 2,370 2,380 2,390 2,400 2,410 2,420 2,430 2,440 2,450 2,460
GTAAGGGGGATTTCTGTTCATGGGGGTAATGATACCGATGAAACGAGAGAGGATGCTCACGATACGGGTTACTGATGATGAACATGCCCGGTTACTGGAACGTTGTG
CATTCCCCCTAAAGACAAGTACCCCCATTACTATGGCTACTTTGCTCTCTCCTACGAGTGCTATGCCCAATGACTACTACTTGTACGGGCCAATGACCTTGCAACAC
M G V M I P M K R E R M L T I R V T D D E H A R L L E R C
2,470 2,480 2,490 2,500 2,510 2,520 2,530 2,540 2,550 2,560
AGGGTAAACAACTGGCGGTATGGATGCGGCGGGACCAGAGAAAAATCACTCAGGGTCAATGCCAGCGCTTCGTTAATACAGATGTAGGTGTTCCACAGGGTAGCCAG
TCCCATTTGTTGACCGCCATACCTACGCCGCCCTGGTCTCTTTTTAGTGAGTCCCAGTTACGGTCGCGAAGCAATTATGTCTACATCCACAAGGTGTCCCATCGGTC
E G K Q L A V W M R R D Q R K I T Q G Q C Q R F V N T D V G V P Q G S Q
2,570 2,580 2,590 2,600 2,610 2,620 2,630 2,640 2,650 2,660 2,670
BspEI
CAGCATCCTGCGATGCAGATCCGGAACATAATGGTGCAGGGCGCTGACTTCCGCGTTTCCAGACTTTACGAAACACGGAAACCGAAGACCATTCATGTTGTTGCTCA
GTCGTAGGACGCTACGTCTAGGCCTTGTATTACCACGTCCCGCGACTGAAGGCGCAAAGGTCTGAAATGCTTTGTGCCTTTGGCTTCTGGTAAGTACAACAACGAGT
Q H P A M Q I R N I M V Q G A D F R V S R L Y E T R K P K T I H V V A Q
2,680 2,690 2,700 2,710 2,720 2,730 2,740 2,750 2,760 2,770 2,780
PpuMI
GGTCGCAGACGTTTTGCAGCAGCAGTCGCTTCACGTTCGCTCGCGTATCGGTGATTCATTCTGCTAACCAGTAAGGCAACCCCGCCAGCCTAGCCGGGTCCTCAACG
CCAGCGTCTGCAAAACGTCGTCGTCAGCGAAGTGCAAGCGAGCGCATAGCCACTAAGTAAGACGATTGGTCATTCCGTTGGGGCGGTCGGATCGGCCCAGGAGTTGC
V A D V L Q Q Q S L H V R S R I G D S F C *
* G T L C G R W G L R T R L S
2,790 2,800 2,810 2,820 2,830 2,840 2,850 2,860 2,870 2,880

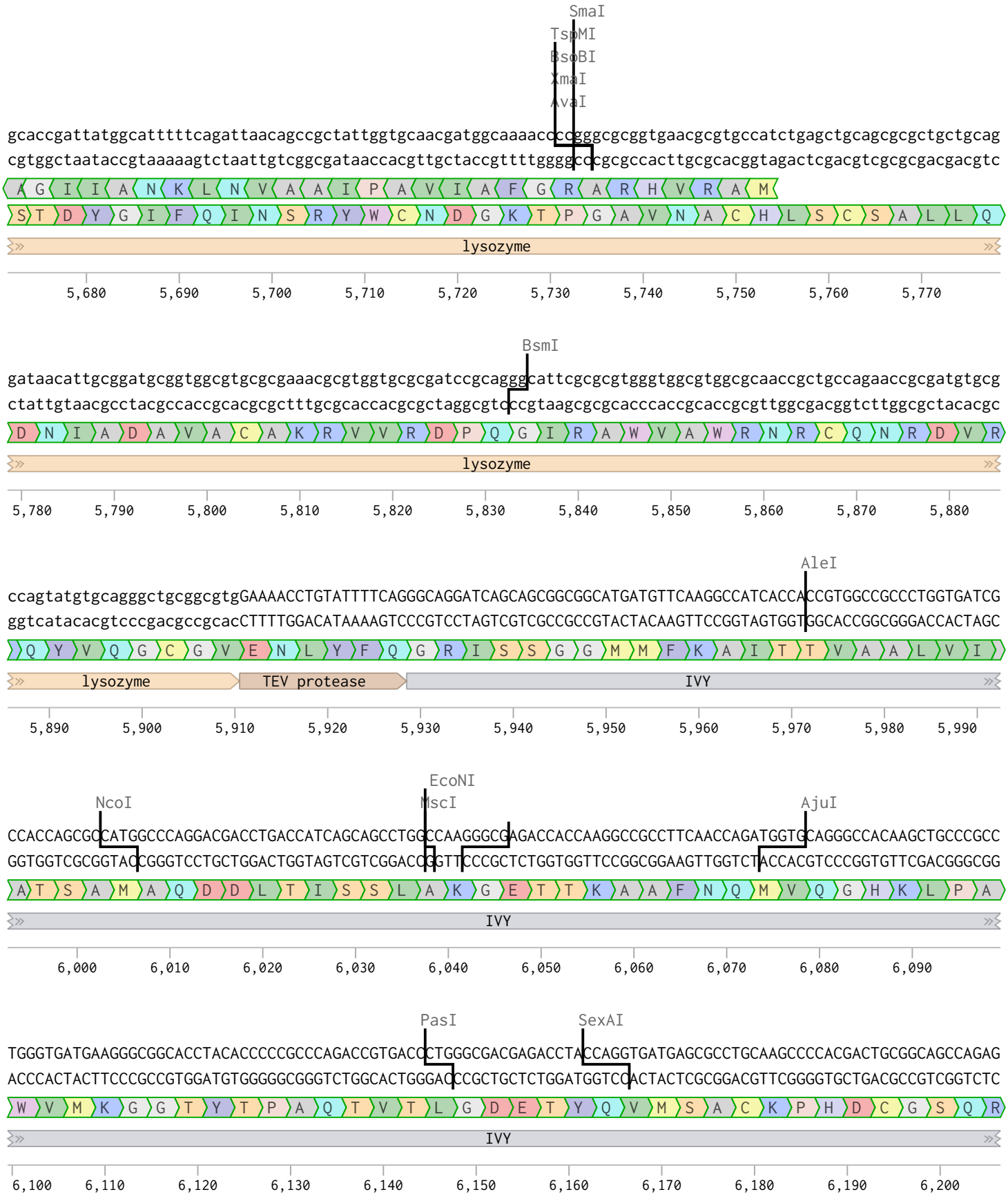

FspAI
MscI
PpuMI
BsoBI
AvaI
ACAGGAGCACGATCATGCGCACCCGTGGCCAGGACCCAACGCTGCCCGAGATGCGCCGCGTGCGGCTGCTGGAGATGGCGGACGCGATGGATATGTTCTGCCAAGGG
TGTCCTCGTGCTAGTACGCGTGGGCACCGGTCCTGGGTTGCGACGGGCTCTACGCGGCGCACGCCGACGACCTCTACCGCCTGCGCTACCTATACAAGACGGTTCCC
L L V I M R V R P W S G V S G S I R R T R S S S I A S A I S I N Q W P
2,890 2,900 2,910 2,920 2,930 2,940 2,950 2,960 2,970 2,980 2,990
BsmI
TTGGTTTGCGCATTCACAGTTCTCCGCAAGAATTGATTGGCTCCAATTCTTGGAGTGGTGAATCCGTTAGCGAGGTGCCGCCGGCTTCCATTCAGGTCGAGGTGGCC
AACCAAACGCGTAAGTGTCAAGAGGCGTTCTTAACTAACCGAGGTTAAGAACCTCACCACTTAGGCAATCGCTCCACGGCGGCCGAAGGTAAGTCCAGCTCCACCGG
* T S T A
M T Q A N V T R R L F Q N A G I R P T T F G N A L H R R S G N L D L H G
3,000 3,010 3,020 3,030 3,040 3,050 3,060 3,070 3,080 3,090 3,100
CGGCTCCATGCACCGCGACGCAACGCGGGGAGGCAGACAAGGTATAGGGCGGCGCCTACAATCCATGCCAACCCGTTCCATGTGCTCGCCGAGGCGGCATAAATCGC
GCCGAGGTACGTGGCGCTGCGTTGCGCCCCTCCGTCTGTTCCATATCCCGCCGCGGATGTTAGGTACGGTTGGGCAAGGTACACGAGCGGCTCCGCCGTATTTAGCG
R S W A G R R L A P L C V L Y L A A G V I W A L G N W T S A S A A Y I A
P E M C R S A V R P P L C P I P R R R C D M G V R E M
3,110 3,120 3,130 3,140 3,150 3,160 3,170 3,180 3,190 3,200 3,210
BspMI
BfuAI
CGTGACGATCAGCGGTCCAGTGATCGAAGTTAGGCTGGTAAGAGCCGCGAGCGATCCTTGAAGCTGTCCCTGATGGTCGTCATCTACCTGCCTGGACAGCATGGCCT
GCACTGCTAGTCGCCAGGTCACTAGCTTCAATCCGACCATTCTCGGCGCTCGCTAGGAACTTCGACAGGGACTACCAGCAGTAGATGGACGGACCTGTCGTACCGGA
M V V I Y L P G Q H G L
T V I L P G T I S T L S T L A A L S G Q L Q G Q H D D D V Q R S L M A Q
3,220 3,230 3,240 3,250 3,260 3,270 3,280 3,290 3,300 3,310
NruI
EagI
GCAACGCGGGCATCCCGATGCCGCCGGAAGCGAGAAGAATCATAATGGGGAAGGCCATCCAGCCTCGCGTCGCCGAACGCCAGCAAGACGTAGCCCAGCGCGTCGGCC
CGTTGCGCCCGTAGGGCTACGGCGGCCTTCGCTCTTCTTAGTATTACCCCTTCCGGTAGGTCGGAGCGCAGCGCTTGCGGTCGTTCTGCATCGGGTCGCGCAGCCGG
Q R G H P D A A G S E K N H N G E G H P A S R R E R Q Q D V A Q R V G
L A P M G I G G S A L L I M I P F A M W G R T A F A L L V Y G L A D A
3,320 3,330 3,340 3,350 3,360 3,370 3,380 3,390 3,400 3,410 3,420
GCCATGCCGGCGATAATGGCCTGCTTCTCGCCGAAACGTTTGGTGGCGGGACCAGTGACGAAGGCTTGAGCGAGGGCGTGCAAGATTCCGAATACCGCAAGCGACAG
CGGTACGGCCGCTATTACCGGACGAAGAGCGGCTTTGCAAACCACCGCCCTGGTCACTGCTTCCGAACTCGCTCCCGCACGTTCTAAGGCTTATGGCGTTCGCTGTC
R H A G D N G L L L A E T F G G G T S D E G L S E G V Q D S E Y R K R Q
A M G A I I A Q K E G F R K T A P G T V F A Q A L A H L I G F V A L S L
3,430 3,440 3,450 3,460 3,470 3,480 3,490 3,500 3,510 3,520 3,530

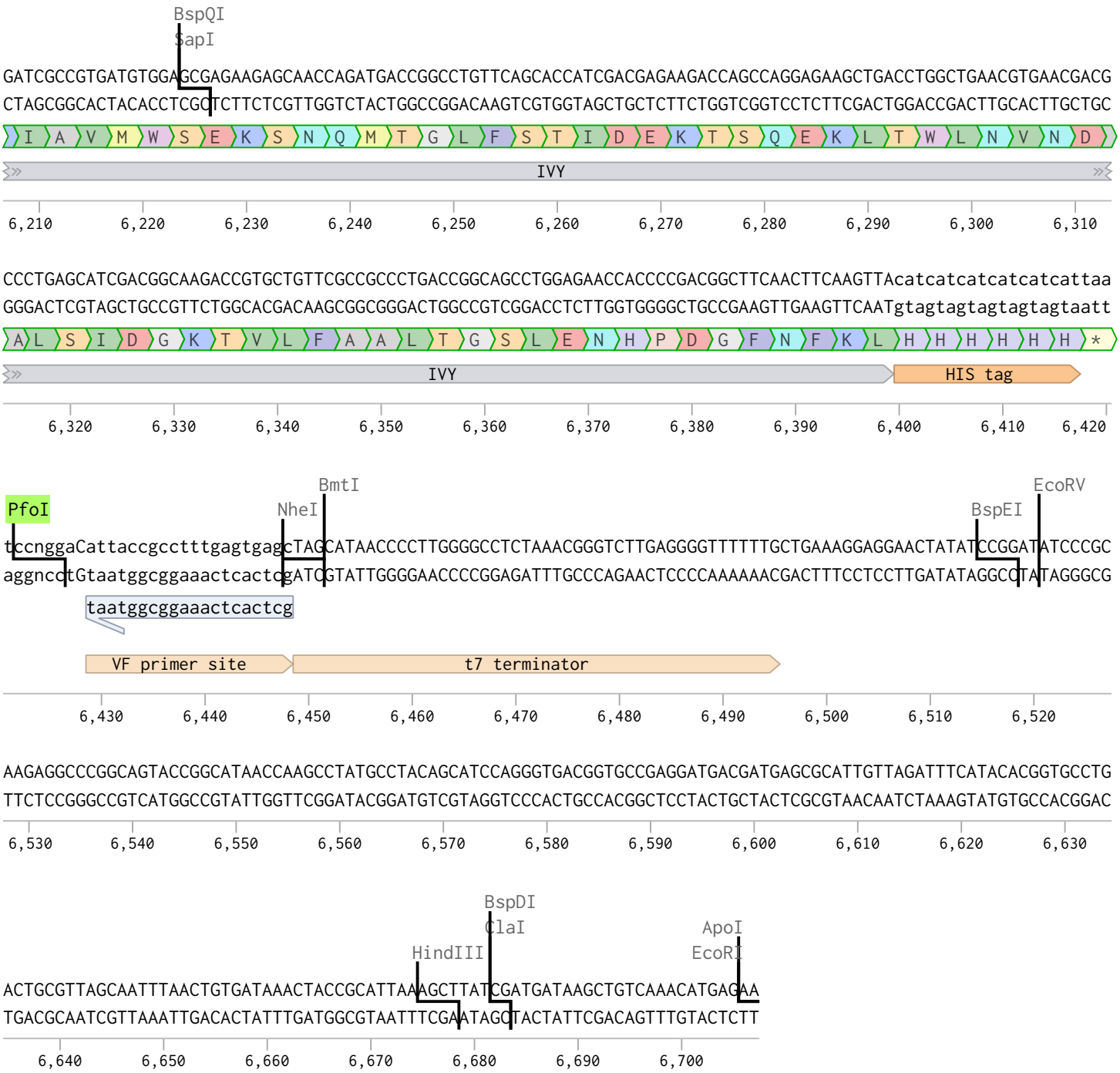

GCCGATCATCGTCGCGCTCCAGCGAAAGCGGTCCTCGCCGAAAATGACCCAGAGCGCTGCCGGCACCTGTCCTACGAGTTGCATGATAAAGAAGACAGTCATAAGTG
CGGCTAGTAGCAGCGCGAGGTCGCTTTCGCCAGGAGCGGCTTTTACTGGGTCTCGCGACGGCCGTGGACAGGATGCTCAACGTACTATTTCTTCTGTCAGTATTCAC
A D H R R A P A K A V L A E N D P E R C R H L S Y E L H D K E D S H K C
G I M T A S W R F R D E G F I V W L A A P V Q G V L Q M I F F V T M L A
3,540 3,550 3,560 3,570 3,580 3,590 3,600 3,610 3,620 3,630
PshAI
CGGCGACGATAGTCATGCCCCGCGCCCACCGGAAGGAGCTGACTGGGTTGAAGGCTCTCAAGGGCATCGGTCGAGATCCCGGTGCCTAATGAGTGAGCTAACTTACA
GCCGCTGCTATCAGTACGGGGCGCGGGTGGCCTTCCTCGACTGACCCAACTTCCGAGAGTTCCCGTAGCCAGCTCTAGGGCCACGGATTACTCACTCGATTGAATGT
G D D S H A P R P P E G A D W V E G S Q G H R S R S R C L M S E L T Y
A V I T M G R A W R F S S V P N F A R L P M
3,640 3,650 3,660 3,670 3,680 3,690 3,700 3,710 3,720 3,730 3,740
BsaXI
TTAATTGCGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCG
AATTAACGCAACGCGAGTGACGGGCGAAAGGTCAGCCCTTTGGACAGCACGGTCGACGTAATTACTTAGCCGGTTGCGCGCCCCTCTCCGCCAAACGCATAACCCGC
I N C V A L T A R F P V G K P V V P A A L M N R P T R G E R R F A Y W A
* Q G S E L R S V Q R A L Q M L S D A L A R P S A T Q T N P A
lac I
3,750 3,760 3,770 3,780 3,790 3,800 3,810 3,820 3,830 3,840 3,850
Esp3I
BsmBI
CCAGGGTGGTTTTTCTTTTCACCAGTGAGACGGGCAACAGCTGATTGCCCTTCACCGCCTGGCCCTGAGAGAGTTGCAGCAAGCGGTCCACGCTGGTTTGCCCCAGC
GGTCCCACCAAAAAGAAAAGTGGTCACTCTGCCCGTTGTCGACTAACGGGAAGTGGCGGACCGGGACTCTCTCAACGTCGTTCGCCAGGTGCGACCAAACGGGGTCG
P G W F F F S P V R R A T A D C P S P P G P E R V A A S G P R W F A P A
L T T K R K V L S V P L L Q N G K V A Q G Q S L Q L L R D V S T Q G L
lac I
3,860 3,870 3,880 3,890 3,900 3,910 3,920 3,930 3,940 3,950
HincII
HpaI
EcoRV
AGGCGAAAATCCTGTTTGATGGTGGTTAACGGCGGGATATAACATGAGCTGTCTTCGGTATCGTCGTATCCCACTACCGAGATATCCGCACCAACGCGCAGCCCGGA
TCCGCTTTTAGGACAAACTACCACCAATTGCCGCCCTATATTGTACTCGACAGAAGCCATAGCAGCATAGGGTGATGGCTCTATAGGCGTGGTTGCGCGTCGGGCCT
G E N P V *
L R F D Q K I T T L P P I Y C S S D E T D D Y G V V S I D A G V R L G S
lac I
3,960 3,970 3,980 3,990 4,000 4,010 4,020 4,030 4,040 4,050 4,060


CTCGGTAATGGCGCGCATTGCGCCCAGCGCCATCTGATCGTTGGCAACCAGCATCGCAGTGGGAACGATGCCCTCATTCAGCATTTGCATGGTTTGTTGAAAACCGG
GAGCCATTACCGCGCGTAACGCGGGTCGCGGTAGACTAGCAACCGTTGGTCGTAGCGTCACCCTTGCTACGGGAGTAAGTCGTAAACGTACCAAACAACTTTTGGCC
E T I A R M A G L A M Q D N A V L M A T P V I G E N L M Q M T Q Q F G S
lac I
4,070 4,080 4,090 4,100 4,110 4,120 4,130 4,140 4,150 4,160 4,170
ApoI
ACATGGCACTCCAGTCGCCTTCCCGTTCCGCTATCGGCTGAATTTGATTGCGAGTGAGATATTTATGCCAGCCAGCCAGACGCAGACGCGCCGAGACAGAACTTAAT
TGTACCGTGAGGTCAGCGGAAGGGCAAGGCGATAGCCGACTTAAACTAACGCTCACTCTATAAATACGGTCGGTCGGTCTGCGTCTGCGCGGCTCTGTCTTGAATTA
M A S W D G E R E A I P Q I Q N R T L Y K H W G A L R L R A S V S S L
lac I
4,180 4,190 4,200 4,210 4,220 4,230 4,240 4,250 4,260 4,270 4,280
ApaI
PspOMI
BstEII
GGGCCCGCTAACAGCGCGATTTGCTGGTGACCCAATGCGACCAGATGCTCCACGCCCAGTCGCGTACCGTCTTCATGGGAGAAAATAATACTGTTGATGGGTGTCTG
CCCGGGCGATTGTCGCGCTAAACGACCACTGGGTTACGCTGGTCTACGAGGTGCGGGTCAGCGCATGGCAGAAGTACCCTCTTTTATTATGACAACTACCCACAGAC
R G A L L A I Q Q H G L A V L H E V G L R T G D E H S F I I S N I P T Q
lac I
4,290 4,300 4,310 4,320 4,330 4,340 4,350 4,360 4,370 4,380
BclI
GTCAGAGACATCAAGAAATAACGCCGGAACATTAGTGCAGGCAGCTTCCACAGCAATGGCATCCTGGTCATCCAGCGGATAGTTAATGATCAGCCCACTGACGCGTT
CAGTCTCTGTAGTTCTTTATTGCGGCCTTGTAATCACGTCCGTCGAAGGTGTCGTTACCGTAGGACCAGTAGGTCGCCTATCAATTACTAGTCGGGTGACTGCGCAA
D S V D L F L A P V N T C A A E V A I A D Q D D L P Y N I I L G S V R Q
lac I
4,390 4,400 4,410 4,420 4,430 4,440 4,450 4,460 4,470 4,480 4,490
GCGCGAGAAGATTGTGCACCGCCGCTTTACAGGCTTCGACGCCGCTTCGTTCTACCATCGACACCACCACGCTGGCACCCAGTTGATCGGCGCGAGATTTAATCGCC
CGCGCTCTTCTAACACGTGGCGGCGAAATGTCCGAAGCTGCGGCGAAGCAAGATGGTAGCTGTGGTGGTCGCACCGTGGGTCAACTAGCCGCGCTCTAAATTAGCGG
A L L N H V A A K C A E V G S R E V M S V V V S A G L Q D A R S K I A
lac I
4,500 4,510 4,520 4,530 4,540 4,550 4,560 4,570 4,580 4,590 4,600
GCGACAATTTGCGACGGCGCGTGCAGGGCCAGACTGGAGGTGGCAACGCCAATCAGCAACGACTGTTTGCCCGCCAGTTGTTGTGCCACGCGGTTGGGAATGTAATT
CGCTGTTAAACGCTGCCGCGCACGTCCCGGTCTGACCTCCACCGTTGCGGTTAGTCGTTGCTGACAAACGGGCGGTCAACAACACGGTGCGCCAACCCTTACATTAA
A V I Q S P A H L A L S S T A V G I L L S Q K G A L Q Q A V R N P I Y N
lac I
4,610 4,620 4,630 4,640 4,650 4,660 4,670 4,680 4,690 4,700


CAGCTCCGCCATCGCCGCTTCCACTTTTTCCCGCGTTTTCGCAGAAACGTGGCTGGCCTGGTTCACCACGCGGGAAACGGTCTGATAAGAGACACCGGCATACTCTG
GTCGAGGCGGTAGCGGCGAAGGTGAAAAAGGGCGCAAAAGCGTCTTTGCACCGACCGGACCAAGTGGTGCGCCCTTTGCCAGACTATTCTCTGTGGCCGTATGAGAC
L E A M
lac I
4,710 4,720 4,730 4,740 4,750 4,760 4,770 4,780 4,790 4,800 4,810
CGACATCGTATAACGTTACTGGTTTCACATTCACCACCCTGAATTGACTCTCTTCCGGGCGCTATCATGCCATACCGCGAAAGGTTTTGCGCCAgTCGATGGTGTCC
GCTGTAGCATATTGCAATGACCAAAGTGTAAGTGGTGGGACTTAACTGAGAGAAGGCCCGCGATAGTACGGTATGGCGCTTTCCAAAACGCGGTcAGCTACCACAGG
lac I
4,820 4,830 4,840 4,850 4,860 4,870 4,880 4,890 4,900 4,910 4,920
EcoNI
SphI
GgGGATCTCGACGCTCTCCCTTATGCGACTCCTGCATTAGGAAGCAGCCCAGTAGTAGGTTGAGGCCGTTGAGCACCGCCGCCGCAAGGAATGGTGCATGCAAGGAG
CcCCTAGAGCTGCGAGAGGGAATACGCTGAGGACGTAATCCTTCGTCGGGTCATCATCCAACTCCGGCAACTCGTGGCGGCGGCGTTCCTTACCACGTACGTTCCTC
4,930 4,940 4,950 4,960 4,970 4,980 4,990 5,000 5,010 5,020
ATGGCGCCCAACAGTCCCCCGGCCACGGGGCCTGCCACCATACCCACGCCGAAACAAGCGCTCATGAGCCCGAAGTGGCGAGCCCGATCTTCCCCATCGGTGATGTC
TACCGCGCGGGTTGTCAGGGGGCCGGTGCCCCGGACGGTGGTATGGGTGCGGCTTTGTTCGCGAGTACTCGGGCTTCACCGCTCGGGCTAGAAGGGGTAGCCACTACAG
* S G S T A L G I K G M P S T
5,030 5,040 5,050 5,060 5,070 5,080 5,090 5,100 5,110 5,120 5,130
SgrAI
BglII
GGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCCGGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCGAGATCTCGATCCCGCGAAATTAATACGACTCAC
CCGCTATATCCGCGGTCGTTGGCGTGGACACCGCGGCCACTACGGCCGGTGCTACGCAGGCCGCATCTCCTAGCTCTAGAGCTAGGGCGCTTTAATTATGCTGAGTG
R S I P A L L R V Q P A P S A P W S A D P T S S R S R S G A F N I R S V
t7 ...er
5,140 5,150 5,160 5,170 5,180 5,190 5,200 5,210 5,220 5,230 5,240
XbaI
TATAGGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGTCCGCAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCAC
ATATCCCCTTAACACTCGCCTATTGTTAAGGGGAGATCTTTATTAAAACAAATTGAAATTCTTCCTCAGGCGTTTCGGGCTTTCCTTCGACTCAACCGACGACGGTG
I P S N H A S L L E G R S I I K N L K L F S D A F G S L F S L Q S S G G
lac operator
t7 RBS
5,250 5,260 5,270 5,280 5,290 5,300 5,310 5,320 5,330 5,340 5,350


AatII
ZraI
PaqCI
BspMI
BfuAI
BlpI
BamHI
tgccacctgacgtctaagaa
Ctgccacctgacgtctaagaa TCCGgctnagcatgaagatcaagaccggcgccaggatcctggccctgagcgccctgaccaccatgatgttcagcgccagcgccctg
Gacggtggactgcagattctt AGGCcgantcgtacttctagttctggccgcggtcctaggaccgggactcgcgggactggtggtactacaagtcgcggtcgcgggac
M K I K T G A R I L A L S A L T T M M F S A S A L
* S D P ? A H L D L G A G P D Q G Q A G Q G G H H E A G A G Q
M K I K T G A R I L A L S A L T T M M F S A S A L
A V Q R R L I R S L M F I L V P A L I R A R L A R V V M I N L A L A R
VF2 primer site
malE
5,360
5,370
5,380
5,390
5,400
5,410
5,420
5,430
5,440
5,450
gccggaggtgacaaagcgctgattgtgctgggcctggtgctcctgagcgtgaccgtgcagggcaaagtgtttgaacgctgcgaactggcgcgcaccctgaaacgcct
cggcctccactgtttcgcgactaacacgacccggaccacgaggactcgcactggcacgtcccgtttcacaaacttgcgacgcttgaccgcgcgtgggactttgcgga
A G G D
G S T V F R Q N H Q A Q H E Q A H G H L A F H K F A A F Q R A G Q F A Q
A G G D K A L I V L G L V L L S V T V Q G K V F E R C E L A R T L K R L
A P P S L A S I T S P R T S R L T V T C P L T N S R Q S S A R V R F R R
malE
lysozyme
5,460
5,470
5,480
5,490
5,500
5,510
5,520
5,530
5,540
5,550
5,560
PvuI
AsiSI
gggcatggatggctatcgcggcattagcctggcgaactggatgtgcctggcgaaatgggaaagcggctataacacccgcgcgaccaactataacgcgggcgatcgca
cccgtacctaccgatagcgccgtaatcggaccgcttgacctacacggaccgctttacccttcgccgatattgtgggcgcgctggttgatattgcgcccgctagcgt
A H I A I A A N A Q R V P H A Q R F P F A A I V G A R G V I V R A I A
G M D G Y R G I S L A N W M C L A K W E S G Y N T R A T N Y N A G D R
P M
lysozyme
5,570
5,580
5,590
5,600
5,610
5,620
5,630
5,640
5,650
5,660
5,670


SmaI
TspMI
BsoBI
XmaI
AvaI
gcaccgattatggcatttttcagattaacagccgctattggtgcaacgatggcaaaacccgggcgcggtgaacgcgtgccatctgagctgcagcgcgctgctgcag
cgtggctaataccgtaaaaagtctaattgtcggcgataaccacgttgctaccgttttgggggcccgcgccacttgcgcacggtagactcgacgtcgcgcgacgacgtc
A G I I A N K L N V A A I P A V I A F G R A R H V R A M
S T D Y G I F Q I N S R Y W C N D G K T P G A V N A C H L S C S A L L Q
lysozyme
5,680 5,690 5,700 5,710 5,720 5,730 5,740 5,750 5,760 5,770
BsmI
gataacattgcggatgcggtggcgtgcgcgaaacgcgtggtgcgcgatccgcagggcattcgcgcgtgggtggcgtggcgcaaccgctgccagaaccgcgatgtgcg
ctattgtaacgcctacgccaccgcacgcgctttgcgcaccacgcgctaggcgtccgtaagcgcgcacccaccgcaccgcgttggcgacggtcttggcgctacacgc
D N I A D A V A C A K R V V R D P Q G I R A W V A W R N R C Q N R D V R
lysozyme
5,780 5,790 5,800 5,810 5,820 5,830 5,840 5,850 5,860 5,870 5,880
AleI
ccagtatgtgcagggctgcggcgtgGAAAACCTGTATTTTCAGGGCAGGATCAGCAGCGGCGGCATGATGTTCAAGGCCATCACCACCGTGGCCGCCCTGGTGATCG
ggtcatacacgtcccgacgccgcacCTTTTGGACATAAAAGTCCCGTCCTAGTCGTCGCCGCCGTACTACAAGTTCCGGTAGTGGTGGCACCGGCGGGACCACTAGC
Q Y V Q G C G V E N L Y F Q G R I S S G G M M F K A I T T V A A L V I
lysozyme
TEV protease
IVY
5,890 5,900 5,910 5,920 5,930 5,940 5,950 5,960 5,970 5,980 5,990
EcoNI
NcoI
MscI
AjuI
CCACCAGCGCCATGGCCCAGGACGACCTGACCATCAGCAGCCTGGCCAAGGGCGAGACCACCAAGGCCGCCTTCAACCAGATGGTGCAGGGCCACAAGCTGCCCGCC
GGTGGTCGCGGTACCGGGTCCTGCTGGACTGGTAGTCGTCGGACCGGTTCCCGCTCTGGTGGTTCCGGCGGAAGTTGGTCTACCACGTCCCGGTGTTCGACGGGCGG
A T S A M A Q D D L T I S S L A K G E T T K A A F N Q M V Q G H K L P A
IVY
6,000 6,010 6,020 6,030 6,040 6,050 6,060 6,070 6,080 6,090
PasI
SexAI
TGGGTGATGAAGGGCGGCACCTACACCCCCGCCCAGACCGTGACCCTGGGCGACGAGACCTACCAGGTGATGAGCGCCTGCAAGCCCCACGACTGCGGCAGCCAGAG
ACCCACTACTTCCCGCCGTGGATGTGGGGGCGGGTCTGGCACTGGGACCCGCTGCTCTGGATGGTCCACTACTCGCGGACGTTCGGGGTGCTGACGCCGTCGGTCTC
W V M K G G T Y T P A Q T V T L G D E T Y Q V M S A C K P H D C G S Q R
IVY
6,100 6,110 6,120 6,130 6,140 6,150 6,160 6,170 6,180 6,190 6,200


BspQI
SapI
GATCGCCGTGATGTGGAGCGAGAAGAGCAACCAGATGACCGGCCTGTTCAGCACCATCGACGAGAAGACCAGCCAGGAGAAGCTGACCTGGCTGAACGTGAACGACG
CTAGCGGCACTACACCTCGCTCTTCTCGTTGGTCTACTGGCCGGACAAGTCGTGGTAGCTGCTCTTCTGGTCGGTCCTCTTCGACTGGACCGACTTGCACTTGCTGC
I A V M W S E K S N Q M T G L F S T I D E K T S Q E K L T W L N V N D
IVY
6,210 6,220 6,230 6,240 6,250 6,260 6,270 6,280 6,290 6,300 6,310
CCCTGAGCATCGACGGCAAGACCGTGCTGTTCGCCGCCCTGACCGGCAGCCTGGAGAACCACCCCGACGGCTTCAACTTCAAGTTAcatcatcatcatcatcattaa
GGGACTCGTAGCTGCCGTTCTGGCACGACAAGCGGCGGGACTGGCCGTCGGACCTCTTGGTGGGGCTGCCGAAGTTGAAGTTCAATgtagtagtagtagtagtaatt
A L S I D G K T V L F A A L T G S L E N H P D G F N F K L H H H H H H *
IVY
HIS tag
6,320 6,330 6,340 6,350 6,360 6,370 6,380 6,390 6,400 6,410 6,420
PfoI
BmtI
NheI
BspEI
EcoRV
tccnggaCattaccgcctttgagtgagcTAGCATAACCCCTTGGGGCCTCTAAACGGGTCTTGAGGGGTTTTTTGCTGAAAGGAGGAACTATATCCGGATATCCCGC
aggnccGtaatggcggaaactcactcgATCGTATTGGGGAACCCCGGAGATTTGCCCAGAACTCCCCAAAAAACGACTTTCCTCCTTGATATAGGCCTATAGGGCG
taatggcggaaactcactcg
VF primer site
t7 terminator
6,430 6,440 6,450 6,460 6,470 6,480 6,490 6,500 6,510 6,520
AAGAGGCCCGGCAGTACCGGCATAACCAAGCCTATGCCTACAGCATCCAGGGTGACGGTGCCGAGGATGACGATGAGCGCATTGTTAGATTTCATACACGGTGCCTG
TTCTCCGGGCCGTCATGGCCGTATTGGTTCGGATACGGATGTCGTAGGTCCCACTGCCACGGCTCCTACTGCTACTCGCGTAACAATCTAAAGTATGTGCCACGGAC
6,530 6,540 6,550 6,560 6,570 6,580 6,590 6,600 6,610 6,620 6,630
BspDI
ClaI
HindIII
ApoI
EcoRI
ACTGCGTTAGCAATTTAACTGTGATAAACTACCGCATTAAAGCTTATCGATGATAAGCTGTCAAACATGAGAA
TGACGCAATCGTTAAATTGACACTATTTGATGGCGTAATTTCGAATAGCTACTATTCGACAGTTTGTACTCTT
6,640 6,650 6,660 6,670 6,680 6,690 6,700