



PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82) EcoNI (96)

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) **Bsu36I (291)**
PvuII (239) EcoNI (287)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGGACTGAGTAACATTCTCTTTGTGATGGCCTTCCT
1▶ M G L S N I L F V M A F L

HindIII (629) PstI (647)

601 GCTCTCTGGTGTCTCCTCTGAAGATTCAAGCTTATTTCAATGAGACTGCAGACCTGCCATGCCAATTTGCAAACCTCTCAAACCAAAGCCTGAGTGAG
13▶ L S G A A P L K I Q A Y F N E T A D L P C Q F A N S Q N Q S L S E

Bst1107I (745)

701 CTAGTAGTATTTTGGCAGGACCAGAAAATTGGTTCTGAATGAGGTACTTAGGCAAGAAAAGAAAATTTGACAGTGTTTCAATCCAAGTATATGGCCGCA
47▶ L V V F W Q D Q E N L V L N E V Y L G K E K F D S V H S K Y M G R

801 CAAGTTTTGATTCGGACAGTTGGACCCTGAGACTTACAATCTCAGATCAAGGACAAGGGCTGTATCAATGTATCATCCATCACAAAAAGCCACAGG
80▶ T S F D S D S W T L R L H N L Q I K D K G L Y Q C I I H H K K P T G

BsaBI (903) **BsrGI (995)**

901 AATGATTCGCATCCACCAGATGAATTCTGAAGTGTGAGTCTGTAACCTCAGTCAACCTGAAATAGTACCAATTTCTAATATAACAGAAAATGTGTAC
113▶ M I R I H Q M N S E L S V L A N F S Q P E I V P I S N I T E N V Y

BstEII (1027)

1001 ATAAATTTGACCTGCTCATCTATACACGGTTACCCAGAACCTAAGAAGATGAGTGTTTTGTCTAAGAACCAAGAATTTCAACTATCGAGTATGATGGTATTA
147▶ I N L T C S S I H G Y P E P K K M S V L L R T K N S T I E Y D G I

1101 TGCAGAAATCTCAAGATAATGTCACAGAATGTACAGACTTCCATCAGCTTGTCTGTTTCCCTGATGTTACGAGCAATATGACCATCTCTGTAT
180▶ M Q K S Q D N V T E L Y D V S I S L S V S F P D V T S N M T I F C I

EcoO109I (1253) PvuII (1292)

1201 TCTGGAAACTGACAAGACGCGGCTTTTATCTTACCTTCTCTATAGAGCTTGAGGACCTCAGCCTCCCCAGACCACATTCTTGGATTACAGCTGTA
213▶ L E T D K T R L L S S P F S I E L E D P Q P P P D H I P W I T A V

1301 CTTCCAACAGTTATTATATGTGTGATGGTTTTCTGTCTAATCTATGAAATGGAAAGAAGAAGCGGCTCGCAACTCTTATAAATGTGGAACCAACA
247▶ L P T V I I C V M V F C L I L W K W K K K R P R N S Y K C G T N

BbsI (1494) **BstBI (1491)**
Bsp119I (1491)

1401 CAATGGAGAGGGAAGAGAGTGAACAGACCAAGAAAAGAGAAAAATCCATATACTGAAAGATCTGATGAAGCCAGCGTGTTTTTAAAAAGTTGGAAGAC
280▶ T M E R E E S E Q T K K R E K I H I P E R S D E A Q R V F K S S K T

BspLU11I (1522) **NheI (1595)**

1501 ATCTTCATGCGACAAAAGTGATACATGTTTTTAATTAAGAGTAAAGCCATACAAGTATTCATTTTTCTACCCTTCTTTGTAAGTTCCTGGGCTAG
313▶ S S C D K S D T C F •

MseI (1601)

1601 CTGGCCAGACATGATAAGATACATTGATGAGTTTGACAACCCACAAC TAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCT

HpaI (1733) MfeI (1744)

1701 TTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACA AATTGCATTATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAA

1801 GCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGG

1901 ATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATATAGTATTTTCCAA

SapI (2011) **SspI (2068)** SwaI (2082)

2001 GGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTT TAGTAAATATTCAGAAATAATTTAAATACATCATTGC

EcoO109I (2143)

2101 AATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAGGAACCTT

2201 TAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCAT
141▶ • N R T Y K L P I L E E I T T K V L K G N

SacI (2343)

2301 TCATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATC
120▶ M E I L V F C D P A Y D S I L E R C M G C P S V V R I S R D V E D

2401 AGAGTAGGGTCCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCCTG
87▶ S Y P H R V A V I T D F D K Q G N S V A S G I A I A E A C V T V R

StuI (2507)

2501 CCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGA
53▶ G I Y A E I H V A S I I E G T K T R I A A G V H H K N D E Y L M T I

BbsI (2653)
XmnI (2649)

2601 TCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGA
20 K E T A V E V L E L D Q Q S I N F T K M

AseI (2715) **SacI (2772)**

2701 TATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCG

SpeI (2870) **SnaBI (2998)**

2801 TACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCA

2901 ATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATA

3001 CGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACT

NdeI (3103)

3101 TGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGA

PstI (3282) **SdaI (3281)** **BspLU11I**

3201 ACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAATAAGAA

3301 CATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAT

3401 CGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGC

3501 CGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTGCTTCGCTC

ApaLI (3613)

3601 CAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCG

3701 CCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAA

3801 GAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGG

3901 TTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAAC

EagI (4049)
NotI (4048)

Swal (4038)

4001 TCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTT

4101 GTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACA

4201 TTTCTCTATCGAA