



PvuI (7) SgfI (6) MfeI (82)  
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCCGCAATTGAACGGGTGCCTA  
101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTGTGCTGTACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)  
201 Psp1406I (203) PvuII (239) Bsu36I (291)  
GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555) AgeI (552) NcoI (560)  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGTGACGCTTGTGAAGTCTGGTCTCTGCGCCG  
1 M V T L A E L L V L L A A

MscI (605) BstEII (669)  
601 TCTCCTGGCCACGGTCTCGGGCTATTTCTGTTAGCATCGACGCCATGTGAAGAGTGTCTTTGAGCGGGTACCTCGGGCACAAGATGGGCTCATC  
13 L L A T V S G Y F V S I D A H A E E C F F E R V T S G T K M G L I  
701 TTCGAGGTGGCGGAGGGCGGCTTCTGGACATCGACGTGGAGATTACAGGACCAGATAACAAAGGAATTTACAAAGGAGACAGAGAATCCAGTGGAAAT  
47 F E V A E G G F L D I D V E I T G P D N K G I Y K G D R E S S G K  
801 ACACATTTGCTGCTCACATGGATGGAACATACAAATTTGTTTTAGTAACCGGATGTCCACCATGACTCCAAAAATAGTGATGTTACCATTGATATTGG  
80 Y T F A A H M D G T Y K F C F S N R M S T M T P K I V M F T I D I G

NheI (969) PvuII (986)  
901 GGAGGCTCCAAAAGGACAAGATATGAAACAGAAGCTCACCAGAACAAGCTAGAAGAAATGATCAATGAGCTAGCAGTGGCGATGACAGCTGTAAAGCAC  
113 E A P K G Q D M E T E A H Q N K L E E M I N E L A V A M T A V K H  
1001 GAACAGGAATACATGGAAGTCCGGGAGAGAATACACAGAGCCATCAACGACAACAAACAGCAGAGTGGTCTTTGGTCTCTTTGAAGCTCTTGTT  
147 E Q E Y M E V R E R I H R A I N D N T N S R V V L W S F F E A L V

BstXI (1106) BglIII (1121) BspEI (1151) AvrII (1192)  
1101 TAGTTGCCATGACATTGGGACAGATCTACTACCTGAAGAGATTTTTGAAGTCCGGAGAGTGTTTAAAAAGCCTCTTCTGATGATCCCAACCTAGGAC  
180 L V A M T L G Q I Y Y L K R F F E V R R V V •

MscI (1204)  
1201 TAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATT

HpaI (1336) MfeI (1347)  
1301 GCTTTATTTGTAACCATTATAAGCTGCAATAACAAGTTAACAACAACATTCGATTCATTTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAGGTTTTTT

EcoRI (1432)  
1401 AAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAACTCTTTCTGA  
1501 GGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTCATGAGTAAAGATATAGTATTCTCC

SapI (1614) SspI (1671) SmaI (1685)  
1601 CAAGGTTTGAAGTCTCTTCATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGTAATAATTCAGAAAATTTAAATACATCAT

EcoO109I (1746)  
1701 TGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAAC  
1801 CTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTTGC  
141 • N R T Y K L P I L E E I T T K V L K G

SacI (1946) BstXI (1975)  
1901 CATTATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTC  
121 N 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  
2001 ATCAGAGTAGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGAAC  
88 D 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

StuI (2110)  
2101 CTGCCAATGTAGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGCTCCTCATAGAGCATGG  
54 R 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

BbsI (2256) XmnI (2252)  
2201 TGATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGC  
21 I K E T A V E V L E L D Q Q S I N F T K M

AseI (2318) SacI (2375)  
2301 CGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACTCCCA

2401 CCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAAAACAACTCCCATTGACG  
2501 TCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTA

**SnaBI (2601)**  
2601 ATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTCCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGT

**NdeI (2706)**  
2701 ACTTGGCATATGATACACTTGATGTAAGTCCATAAGTCCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGT

**PstI (2885)**  
**SdaI (2884)**  
2801 GGAACATACGTCATTATTGACGTCAATGGGGCGGGGTCGTTGGGCGGTCCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAA

**BspLU11I (2902)**  
2901 GAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAA  
3001 AATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTCCCGTGGAAAGTCCCTCGTGGCTCTCTGTTCCGACCC  
3101 TGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCG

**ApaLI (3216)**  
3201 CTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCCTTATCCGTAAGTATCGTCTTGAGTCCAACCGGTAAGACACGACTTA  
3301 TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTA  
3401 GAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGG  
3501 TGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTACGGGGTCTGACGCTCAGTGGAAACGAA

**EagI (3652)**  
**PacI (3632)** **Swal (3641)** **NotI (3651)**  
3601 AACTCACGTAAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTT  
3701 TTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGA  
3801 ACATTTCTCTATCGAA