



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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAAGTGTGCTGTACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **BspHI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGGTATCATGACAGCCATCATCAAAGAGATCGTTAGCAGAAAACAA
1 M T A I I K E I V S R N K

EcoRV (605) **PstI (674)** **Bst1107I (694)**
601 AAGGAGATATCAAGAGGATGGATTGCAGTTAGACTTGACCTATATTTATCCAACATTATTGCTATGGGATTTCTGCAGAAAAGACTTGAAGCGTATAC
13 R R Y Q E D G F D L D L T Y I Y P N I I A M G F P A E R L E G V Y

SspI (706)
701 AGGAACAATATTGATGATGTAGTAAGTTTTTGGATTCAAAGCATAAAAACCATTACAAGATATACAATCTTTGTGCTGAAAGACATTATGACACCGCCA
47 R N N I D D V V R F L D S K H K N H Y K I Y N L C A E R H Y D T A

BglII (879)
801 AATTTAATTGCAGAGTTGCACAATATCCTTTTGAAGACCATAACCCACCACAGCTAGAACTTATCAAACCTTTTGTGAAGATCTTGACCAATGGCTAAG
80 K F N C R V A Q Y P F E D H N P P Q L E L I K P F C E D L D Q W L S

BsaBI (904)
901 TGAAGATGACAATCATGTTGCAGCAATTCAGTAAAGCTGGAAGGGACGAAGTGGTGAATGATATGTGCATATTTATTACATCGGGGCAAATTTTTTA
113 E D D N H V A A I H C K A G K G R T G V M I C A Y L L H R G K F L
1001 AAGGCACAAGAGCCCTAGATTTCTATGGGAAAGTAAGGACCAGAGACAAAAAGGAGTAACATTCCAGTCAGAGGCGCTATGTATTATTATAGCT
147 K A Q E A L D F Y G E V R T R D K K G V T I P S Q R R Y V Y Y Y S

XmnI (1162)
1101 ACCTGTTAAAGAATCATCTGGATTATAGACCAGTGGCACTGTTGTTTACAAGATGATGTTTGAAGTATTCCAATGTTCAAGTGGCGGAACCTGCAATCC
180 Y L L K N H L D Y R P V A L L F H K M M F E T I P M F S G G T C N P
1201 TCAGTTTGTGGTCTGCCAGCTAAAGGTGAAGATATATTCCTCCAATTCAGGACCCACACGACGGGAAGACAAGTTCATGTACTTTGAGTTCCTCAGCCG
213 Q F V V C Q L K V K I Y S S N S G P T R R E D K F M Y F E F P Q P

EcoRV (1315)
1301 TTACCTGTGTGGTGATATCAAAGTAGAGTCTTCCACAACAGAACAGATGCTAAAAAGGACAAAATGTTTCACTTTTGGGTAATACATTCTTCA
247 L P V C G D I K V E F F H K Q N K M L K K D K M F H F W V N T F F

ClaI (1459)
1401 TACCAGGACCAGAGAAACCTCAGAAAAAGTAGAAAATGGAAGTCTATGTGATCAAGAAATCGATAGCATTGCGAGTATAGAGCGTGCAGATAATGACAA
280 I P G P E E T S E K V E N G S L C D Q E I D S I C S I E R A D N D K

ScaI (1509)
1501 GGAATATCTAGTACTTACTTTAAACAAAAATGATCTTGACAAAAGCAAATAAGACAAAAGCCAAACCGATACTTTTCTCAAATTTTAAAGGTGAAGCTGTAC
313 E Y L V L T L T K N D L D K A N K D K A N R Y F S P N F K V K L Y

NheI (1636)
1601 TTCACAAAAACAGTAGAGGAGCCGTCAAATCCAGAGGCTAGCAGTTCAACTTCTGTAACACCAGATGTTAGTGACAATGAACCTGATCATTATAGATATT
347 F T K T V E E P S N P E A S S S T S V T P D V S D N E P D H Y R Y

BsaBI (1738)
1701 CTGACACCACTGACTCTGATCCAGAGAATGAACCTTTTGTGAAGATCAGCATACACAAATACAAAAGTCTGAATTTTTTTTTATCAAGAGGGATAAAA
380 S D T T D S D P E N E P F D E D Q H T Q I T K V •

NheI (1812)
EcoRI (1806)
1801 CACCATGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGACAAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTG

HpaI (1975) MfeI (1986)
1901 TGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAACATTGCATTCATT

EcoRI (2071)
2001 TTATGTTTCAGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCTAAAATACAGCATAGCAAACTT

2101 TAACTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCT

SapI (2253)
2201 CACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGTTTGAACCTAGCTCTTCATTCTTTATGTTTAAATGCACTGACCTCCACATTTCC

SspI (2310) SmaI (2324)
 2301 TTTTGTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATA
 2401 TCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGA
 141 • N R T Y K L
 SacI (2585)
 2501 GGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACAT
 134 P I L E E I T T K V L K G N M E I L V F C D P A Y D S I L E R C M
 BstXI (2614)
 2601 GCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACA
 101 G C P S V V R I S R D V E D S Y P H R V A V I T D F D K Q G N S V
 StuI (2749)
 2701 GCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGG
 67 A S G I A I A E A C V T V R G I Y A E I H V A S I I E G T K T R I A
 XmnI (2891)
 2801 CGCCCCGACATGGTCTTGTTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGTCTT
 34 A G V H H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F T K
 AseI (2957)
 2901 CATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTG
 1 M
 SacI (3014)
 3001 ACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAG
 SpeI (3112)
 3101 TCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGT
 SnaBI (3240)
 3201 ACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCA
 NdeI (3345)
 3301 GGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTACCGTAAATACTCCACC
 3401 CATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGAAACATACGTCATTATTGACGTCAATGGGCGGGGTGCTTGGGCGGTGAGCCAGGCGGGC
 PacI (3531)
 PstI (3524)
 SdaI (3523)
 BspLU11I (3541)
 3501 CATTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCG
 3601 TTTTCCATAGGCTCCGCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTC
 3701 CCCTGGAAGCTCCCTCGTGGCTCTCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAG
 ApaLI (3855)
 3801 CTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCCGTTAGCCCGACCGCTGCGCTTATCCGGT
 3901 AACTATCGTCTTGAGTCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGTTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTA
 4001 CAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGG
 4101 TAGCTCTTGATCCGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCT
 EagI (4291)
 Pacl (4271) SmaI (4280) NotI (4290)
 4201 TTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAA
 4301 TAAAAATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAAAACAAACGAAACAAACAAACTA
 4401 GCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA