



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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC EcoNI (287)

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BspHI (560)
AgeI (552) 501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGGCGGCTACCTGAGATCACCGGTCATCATGAGATCCAGTCTGGCAACATGGAGAGGATTGTCAT
1 M R S S P G N M E R I V I

PshAI (624)
601 CTGTCTGATGGTCATCTTCTTGGGGACACTGGTCCACAAATCAAGCTCCAAGGTCAAGATCGCCACATGATTAGAATGCGTCAACTTATAGATTGTT
13 C L M V I F L G T L V H K S S S Q G Q D R H M I R M R Q L I D I V

PvuII (703) **Tth111I (724)**
701 GATCAGCTGAAAAATTATGTGAATGACTTGGTCCCTGAATTTCTGCCAGCTCCAGAAGATGTAGAGACAACTGTGAGTGGTCAGCTTTTTCTGCTTTT
47 D Q L K N Y V N D L V P E F L P A P E D V E T N C E W S A F S C F

801 AGAAGGCCCAACTAAAGTCAGCAAATACAGGAAACAATGAAAGGATAATCAATGATCAATAAAAAGCTGAAGAGGAAACCCTCCACAAATGCAGG
80 Q K A Q L K S A N T G N N E R I I N V S I K K L K R K P P S T N A G

BbsI (902) **EcoRI (964)**
901 GAGAAGACAGAAACACAGACTAACATGCCCTTCATGTGATTCTTATGAGAAAAACCACCCAAAGAATTCCTAGAAAAGATTCAAATCACTTCTCCAAAAG
113 R R Q K H R L T C P S C D S Y E K K P P K E F L E R F K S L L Q K

MscI (1079)
1001 ATGATTCATCAGCATCTGTCTCTAGAACACACGGAAGTGAAGATTCCTGAGGATCTAACTTGCAAGTGGACAGCTAGCTGGCCAGACATGATAAGATAC
147 M I H Q H L S S R T H G S E D S •

XbaI (1021) **Bsu36I (1046)** **NheI (1073)**
1101 ATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCT

HpaI (1211) **MfeI (1222)**
1201 GCAATAAACAAAGTAAACAACAACAAATGCAATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATG

EcoRI (1307)
1301 TGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAG

SapI (1489)
1401 GGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTATTTCCTCAAGGTTTGAAGTACTGCTCTTCATTT

SspI (1546) **SwaI (1560)**
1501 CTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATTAATTAATACATCATTGCAATGAAAATAAATGTTTTTTAT

EcoO109I (1621)
1601 TAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGAAACAAAGAACCTTTAATAGAAATGGACAGCAAGA

1701 AAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCA
141 • N R T Y K L P I L E E I T T K V L K G N M E I L V F C

SacI (1821) **BstXI (1850)**
1801 GTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCC
113 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 S Y P H R V A

StuI (1985)
1901 ACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCAATGAGGCTCAATGAGCACAAGCA
79 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 G I Y A E I H V

2001 CAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCCGACATGGTGCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCAC
46 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 K E T A V E V

BbsI (2131) **XmnI (2127)** **AseI (2193)**
2101 CAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAAT
13 L E L D Q Q S I N F T K M

SacI (2250)
2201 GTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGC

SpeI (2348)
2301 GTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTGATTTACTAGTCAAAACAAACTCCCATGACGTCAATGGGGTGGAGACTTGGAAATC

SnaBI (2476)
2401 CCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCAAAGTAGG

NdeI (2581)

2501 AAAGTCCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGT

2601 ACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCA

PacI (2767)

PstI (2760)

SdaI (2759)

BspLU11I (2777)

2701 ATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAA

2801 AAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGC

2901 GAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGC

ApaLI (3091)

3001 CTTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAA

3101 CCCCCGTTACGCCGACCGCTGCGCTTATCCGGTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTA

3201 ACAGGATTAGCAGAGCGAGGTATGTAGGCGGTCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGC

3301 TCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAG

3401 ATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACTCACGTTAAGGGATTTTGGTCA

EagI (3527)

PacI (3507)

SwaI (3516)

NotI (3526)

3501 TGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATAC

3601 GCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA