



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

MfeI (82)
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCGCTACCTGAGGCC

PvuII (239)
Bsu36I (291) 301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGAATCATCATCGGAACAGAAATCTATAACTTTGT

NcoI (560) 1 M E S S S E Q K F Y N F V

EcoO109I (656)
601 GATCCTCCACGCCAGGGCAGACGAACACATCGCCCTGCGGGTTCGGGAGAAGCTGGAGGCCCTTGGCGTGCCCGACGGGGCCACCTTCTGCGAGGATTTCC

13 I L H A R A D E H I A L R V R E K L E A L G V P D G A T F C E D F

PstI (730)
SdaI (729) 701 CAGGTGCATGGGCGCGGGAGCTGAGCTGCCTGCAGGACCCATAGACCCTCAGCTTTCATCATCTACTTCTCACCTCCAACCTCGACTGTCGCTGA

47 Q V H G R G E L S C L Q D A I D H S A F I I L L L T S N F D C R L

DraIII (805) 801 GCCTGCACCAGGTGAACCAAGCCATGATGAGCAACCTCACGCGACAGGGGTGCCAGACTGTGTCATCCCCTTCTGCCCTGGAGAGCTCCCCGGCCCA

80 S L H Q V N Q A M M S N L T R Q G S P D C V I P F L P L E S S P A Q

BglII (959) 901 GCTCAGCTCCGACACGGCCAGCCTGCTCTCCGGGTGGTGGGCTGGACGAACACTCCAGATCTTCCGAGGAAGTGGCCAACACCTTCAAGCCCCAC

113 L S S D T A S L L S G L V R L D E H S Q I F A R K V A N T F K P H

MscI (977)
SfiI (1008) 1001 AGGCTTACAGCCCGAAAGGCCATGTGGAGGAAGGAACAGGACACCCGAGCCCTGCGGGAACAGAGCCAACACCTGGACGGTGAAGCGGATGCAGGCGGCGG

147 R L Q A R K A M W R K E Q D T R A L R E Q S Q H L D G E R M Q A A

MscI (1115)
NheI (1109) 1101 CACTGTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT

180 A L •

HpaI (1247) 1201 GTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTATGTTTCAGGTTACAGGGGAGGTGTG

MfeI (1258)

EcoRI (1343) 1301 GGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGA

1401 TCCTTTCTGAGGATGAATAAGGCATAGGCATAGGGGCTGTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATATA

SapI (1525) 1501 GTGTATTTCCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTAGTAAAAATTCAGAAATAATTT

SspI (1582) SwaI (1596)

EcoO109I (1657)
1601 AAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGG

1701 AACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGCTGACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTT

141 • N R T Y K L P I L E E I T T K

1801 GACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCCAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGAT

125 V L K G 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

1901 CTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCAC

91 R D V E 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

StuI (2021) 2001 AGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTTCCTC

58 V T V 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

BbsI (2167)
XmnI (2163) 2101 ATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAAGTCGTA

25 Y L M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (2229) 2201 TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAACAGACTCTGCTTATA

SpeI (2384)

2301 TAGACCTCCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAAAC

2401 TCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT

SnaBI (2512)

2501 AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCA

NdeI (2617)

2601 ATAGGGGGCGTACTTGCCATATGATACACTTGTACTGCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTG

PstI (2796)

SdaI (2795)

2701 GCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGC

PacI (2803) BspLU11I (2813)

2801 AGGTTAAITAAAGACATGTGAGCAAAAGGCCAGCAAAAGGCCAGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACG

2901 AGCATCACA AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCC

3001 TGTTCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTG

ApaLI (3127)

3101 TAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAA

3201 GACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTA

3301 CGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACC

3401 GCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC

EagI (3563)

PacI (3543) SwaI (3552) NotI (3562)

3501 AGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTG

3601 TGTGTTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAACAAAACGAAACAAAACAAAACCTAGCAAATAGGCTGTCCCAGTGAAGTG

3701 CAGGTGCCAGAACATTTCTATCGAA