



PvuI (7)
SgfI (6)
MfeI (82)

1 GGATCTGCGATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

Psp1406I (203)
PvuII (239)
Bsu36I (291)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)

AgeI (552) **NcoI (560)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGAATCATCATCGGAACAGAAATCTATAACTTTGT

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 CAGGTGCATGGGCGGGGAGCTGAGCTGCCTGCAGGACCCATAGACCCTCAGCTTTCATCATCTACTTCTCACCTCCAACCTCGACTGTCGCTGA

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)
PshAI (842)
Tth111I (856)

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) **MscI (977)**

901 GCTCAGCTCCGACACGGCCAGCCTGCTCTCCGGGCTGGTGGGCTGGACGAACACTCCAGATCTTCCGAGGAAGGTGGCCAAACACCTTCAAGCCCCAC

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

SfiI (1008)
BsrBI (1081)

1001 AGGCTTACAGCCCCGAAAGGCCATGTGGAGGAAGGAACAGGACACCCGAGCCCTGCGGGAACAGAGCCAACACCTGGACGGTGAAGCGGATGCAGGCGGCGG

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 CACTGTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT

180▶ A L •

HpaI (1247) **MfeI (1258)**

1201 GTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAAATTGCATTCATTTATGTTTCAGGTTACAGGGGAGGTGTG

EcoRI (1343)

1301 GGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGA

1401 TCCTTTTCTGAGGATGAATAAGGCATAGGCATAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAGATATA

SapI (1525)
SspI (1582)
SwaI (1596)

1501 GTGTATTTTCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAAATTCAGAAATAATTT

EcoO109I (1657)

1601 AAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGG

1701 AACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTT

141◀ • N R T Y K L P I L E E I T T K

1801 GACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGAT

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 CTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCAC

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 ATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTA

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 TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCTGCTTATA

SpeI (2384)

2301 TAGACCTCCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAAAC

2401 TCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT

SnaBI (2512)

2501 AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTACCAGTCATTGACGTCA

NdeI (2617)

2601 ATAGGGGGCGTACTTGCCATATGATACACTTGTACTGCAAGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTG

PstI (2796)

SdaI (2795)

2701 GCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTACCCTAAGTTATGTAACGCCTGC

PacI (2803) BspLU11I (2813)

2801 AGGTTAAITAAAGACATGTGAGCAAAAGGCCAGCAAAAGGCCAGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACG

2901 AGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCC

3001 TGTTCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTG

ApaLI (3127)

3101 TAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTGACCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAA

3201 GACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTA

3301 CGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACC

3401 GCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC

EagI (3563)

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

3501 AGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTG

3601 TGTGTTGGTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAACAAAACGAAACAAAACAAAACCTAGCAAATAGGCTGTCCCAGTGAAGTG

3701 CAGGTGCCAGAACATTTCTATCGAA