



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

1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGGAAAGTATGTCGTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGGC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCAGCTTTGCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)

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

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGCGGACGAGGAGAAGCTGCCGCCGGCTGGGAGAA

601 GCGCATGAGCCGAGCTCAGGCCGAGTGTACTACTTCAACCACATCACTAACGCCAGCCAGTGGGAGCGGCCAGCGGCAACAGCAGCAGTGGTGGCAAA

13▶ R M S R S S G R V Y Y F N H I T N A S Q W E R P S G N S S S G G K

701 AACGGGACAGGGGAGCCTGCCAGGGTCCGCTGCTCGCACCTGCTGGTGAAGCACAGCCAGTACGCGCGCCCTCGTCTGGCGGCAGGAGAAGATCACCC

47▶ N G Q G E P A R V R C S H L L V K H S Q S R R P S S W R Q E K I T

PstI (897)

801 GGACCAAGGAGGAGGCCCTGGAGCTGATCAACGGCTACATCCAGAAGTCAAGTGGGAGAGGAGGACTTTGAGTCTCTGGCCTCACAGTTTACGCGACTG

80▶ R T K E E A L E L I N G Y I Q K I K S G E E D F E S L A S Q F S D C

XcmI (914) **BbsI (964)**

901 CAGCTCAGCCAAGGCCAGGGGAGACCTGGTGCCTTACGAGAGGTCAGATGCAGAAGCCATTTGAAGACGCCTCGTTTGGCTGCGGACGGGGGAGATG

113▶ S S A K A R G D L G A F S R G Q M Q K P F E D A S F A L R T G E M

NheI (1068)

Bsp120I (1003)
DraIII (1044)
BstXI (1065)**MscI (1074)**

1001 AGCGGGCCCGTGTTCACGGATCCGGCATCCACATCATCTCCGACTGAGTGAGGGTGGGGAGCCAGCTAGCTGGCCAGACATGATAAGATACATTGA

147▶ S G P V F T D S G I H I I L R T E •

1101 TGAGTTTGACAAACCACAACACTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAAT

HpaI (1206) **MfeI (1217)**

1201 AAACAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTA

EcoRI (1302)

1301 TGGAAATCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCT

1401 GTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTAGCTCTTCATTTCTTTA

SspI (1541) **SwaI (1555)**

1501 TGTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGC

EcoO109I (1616)

1601 AGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGAACCTTTAATAGAAATGGACAGCAAGAAAGCG

1701 AGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAG

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 D P

SacI (1816) **BstXI (1845)**

1801 GAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAAT

111▶ 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 V I

StuI (1980)

1901 GGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTTCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCA

78▶ 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 A

2001 GAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCT

44▶ 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 L E

BbsI (2126)

XmnI (2122)
AseI (2188)

2101 CCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAA

11▶ L D Q Q S I N F T K M

SacI (2245)

2201 AACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACTCCACCGTACACGCCTACCGCCATTTGCGTCAA

2301 TGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGT
SpeI (2343)
←

2401 GAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGT
SnaBI (2471)

2501 CCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGC
NdeI (2576)

2601 CAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGG

2701 CGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGC
PstI (2755)
SdaI (2754)
PacI (2762)
←
BspLU11I (2772)

2801 CAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC

2901 CCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAAGTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTC

3001 TCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC
ApaLI (3086)

3101 CGTTCAGCCCAGCCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG

3201 ATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGC

3301 TGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTAC

3401 GCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACACGTTAAGGGATTTTGGTCATGGCT

3501 AGTTAATTAACATTTAATCAGCGGCCCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCT
PacI (3502) SmaI (3511) EagI (3522)
NotI (3521)

3601 CCATCAAAAACAAAACGAAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA