



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

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTATGTCGTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)

AgeI (552)
NcoI (560)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGCCCTGAGTGTATGTGTCTGGCCCTTGCCCTGCT

1 ▶ M A L S V M C L G L A L L

EcoO109I (602)
BspEI (686)

601 TGGGGTCTGCAGAGCCAGGCCAGGACTCAACTCAGAACTTATCCCTGCCCATCTCTGCTCACTGCCCCCTGCAGCCAGACTTCCGGAGCGATCAG

13▶ G V L Q S Q A Q D S T Q N L I P A P S L L T V P L Q P D F R S D Q

BstAPI (730) **BsrGI (773)**

701 TTCCGGGCGAGGTGGTACGTTGTGGCCTGGCAGGCAATGCGGTCCAGAAAAAACAAGGAGCCTTACGATGTACAGCACCATCTATGAGCTACAAG

47▶ F R G R W Y V V G L A G N A V Q K K T E G S F T M Y S T I Y E L Q

801 AGAACAACTAGCTACAATGTCACCTCCATCCTGGTCAGGGACCAGGACCAGGGCTGCGCTACTGGATCAGAACATTTGTTCCAAGCTCCAGGGCTGGCCA

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

Bsu36I (928)
NcoI (983)
XmnI (998)

901 GTTCACTCTGGGAAATATGCACAGGTATCCTCAGGTACAGAGCTACAATGTGCAAGTGGCCACCACGGACTACAACCAGTTCCGCATGGTATTTTTCCGA

113▶ F T L G N M H R Y P Q V Q S Y N V Q V A T T D Y N Q F A M V F F R

Psp1406I (1076)
BstXI (1094)

1001 AAGACTTCTGAAAACAAGCAATACTTCAAATACCCTGTATGGAAGAACCAAGGAGCTGTCCCTGAACTGAAGGAACGTTTCACCCGCTTTGCCAAGT

147▶ K T S E N K Q Y F K I T L Y G R T K E L S P E L K E R F T R F A K

NsiI (1149) **NheI (1181)**

1101 CTCTGGCCTCAAGGACGACAACATCATCTTCTGTCCCCACCGACCAATGCATTGACAACCTGAATGGGTGGTGAAGTGTGGCTAGCTGGCCAGACATGA

180▶ S L G L K D D N I I F S V P T D Q C I D N •

1201 TAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAGAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCAT

HpaI (1319) **MfeI (1330)**

1301 TATAAGCTGCAATAAACAAAGTTAACAAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTC

EcoRI (1415)

1401 TACAAATGTTGATGGAATTCAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATA

SapI (1597)

1501 GGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTCCCAAGGTTTGAAGTACT

SspI (1654) **Swal (1668)**

1601 CTTCAATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAATG

EcoO109I (1729)

1701 TTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATGGA

1801 CAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGTTGACTTGGGGGATGAGTTCCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGC

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

SacI (1929) **BstXI (1958)**

1901 ACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCC

115▶ V F C 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

StuI (2093)

2001 TGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTC

82▶ V A 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

2101 AATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGTATGGCCGCCCCGACATGGTGTCTGTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCG

49▶ I H V 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

BbsI (2239)

XmnI (2235)

2201 ACCTCCACGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGAT

15▶ V E V L E L D Q Q S I N F T K M

AseI (2301) **SacI (2358)**
 2301 GATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGC

SpeI (2456)
 2401 CCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACT

SnaBI (2584)
 2501 TGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGC

NdeI (2689)
 2601 CAAGTAGGAAAGTCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACA

2701 CTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTAT

PacI (2875)
SdaI (2867) **BspLU11I (2885)**
 2801 TGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAG

2901 GCCAGCAAAGGCCAGGAACCGTAAAAAGCGCGTGTGCTGGCCTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCA

3001 GAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGTTACCGGATA

ApaLI (3199)
 3101 CTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTG

3201 TGCACGAACCCCGTTTCCAGCCGACCGCTGCGCTTATCCGTAATCTCGTCTTGAAGTCCGTAAGACACGACTTATCGCCACTGGCAGCAGC

3301 CACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGT

3401 ATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTATGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGA

3501 AGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGAT

EagI (3635)
PacI (3615) **SwaI (3624)** **NotI (3634)**
 3601 TTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAAC

3701 TAACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA