



PvuI (7)
SgfI (6)
EcoNI (96)

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

KasI (535)
AgeI (552)
NcoI (560)
BstEII (555)
ApaLI (598)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATTGGAGCGTGTGCTTGGCTTGTGCTTGTGCTTCTGGT
 1▶ M E R V L G L L L L L L V

EagI (735)
NotI (734)
XmnI (748)
Eco47III (688)

601 GCACGCTCTCCCGCCACCAGAGCCCTGCGAGCTAGACGAGAAAGTTGTTCTGCAACTTCTCAGATCCGAGCCAGATTGGTCCAGCGCTTCAAT
 13▶ H A S P A P P E P C E L D E E S C S C N F S D P K P D W S S A F N

BglIII (780)

701 TGTTTGGGGCGGAGATGTGGAATTGTACGGCGGCGGCGCAGCCTGGAATACCTTCTAAAGCGTGTGGACACGGAAGCAGATCTGGGGCAGTTCAGT
 47▶ C L G A A D V E L Y G G G R S L E Y L L K R V D T E A D L G Q F T
 801 ATATTATCAAGTCTGTCTTAAAGCGGCTTACGGTGCAGGCGCGGCGGATTCTAGTCTGATTCTATTTCGAGCCCTGCGTGTGCTCGGGATTCCGG
 80▶ D I I K S L S L K R L T V R A A R I P S R I L F G A L R V L G I S G

XhoI (925)

901 CCTCCAGGAAGTACTCTTAAAAATCTCGAGGTAACCGGCACCGCGCCGCCACCGCTTCTGGAAGCCACCGGACCCGATCTCAACATCTTGAACCTCCGC
 113▶ L Q E L T L E N L E V T G T A P P P L L E A T G P D L N I L N L R
 1001 AACGTGTCGTGGGCAACAAGGGATGCCTGGCTCGCAGAACTGCAGCAGTGGCTAAAGCCTGGACTCAAGTACTGAGTATTGCCAAGCACACTCACTCA
 147▶ N V S W A T R D A W L A E L Q Q W L K P G L K V L S I A Q A H S L

BbsI (1123)

1101 ACTTTTCTGCGAACAGGTCCGCGTCTTCCCTGCCCTTCCACCTTAGACCTGTCTGACAATCCTGAATTGGGCGAGAGAGGACTGATCTCAGCCCTCTG
 180▶ N F S C E Q V R V F P A L S T L D L S D N P E L G E R G L I S A L C

Eco47III (1230)
PvuII (1297)

1201 TCCCTCAAGTTCGACCTCCAAGTTTTAGCGCTGCGTAACGCGGGATGGAGACGCCAGCGGCTGTGCTCTGCGCTGGCCGACGAAAGGTACAG
 213▶ P L K F P T L Q V L A L R N A G M E T P S G V C S A L A A A R V Q

PshAI (1312)

1301 CTGCAAGGACTAGACCTTAGTCACAATTAAGTGGGATGCTGCAGGCGCTCCGAGTTGTGACTGGCCAGTCAAGTAACTCGCTCAATCTGTCTTTCA
 247▶ L Q G L D L S H N S L R D A A G A P S C D W P S Q L N S L N L S F

Acc65I (1413)

1401 CTGGGCTGAAGCAGGTACCTAAAGGGCTGCCAGCAAGCTCAGCGTGTGATCTCAGTTACAACAGGCTGGATAGGAACCCTAGCCAGATGAGCTGCC
 280▶ T G L K Q V P K G L P A K L S V L D L S Y N R L D R N P S P D E L P
 1501 CCAAGTGGGAACTGTCACTTAAAGGAAATCCCTTTTGGACTCTGAATCCCCTCGGAGAAAGTTAACTCTGGCGTAGTCACCGCCGAGCTCCATCA
 313▶ Q V G N L S L K G N P F L D S E S H S E K F N S G V V T A G A P S

AvrII (1638)
NheI (1682)

1601 TCCAAGCAGTGGCCTTGTGAGAACTCTGGCTTTGCTCTAGGAGATCGCCTCTTTGTTTAAAGAACATTTGCATCCTCCTGCTAGCTGGCCAGACATG
 347▶ S Q A V A L S G T L A L L L G D R L F V •

HpaI (1820)

1801 TTATAAGCTGCAATAAACAAAGTTAAACAACAACAACTTATTTATGTTTCAGGTTCAAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAACCT

EcoRI (1916)

1901 CTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCAT

SapI (2098)

2001 AGGCATCAGGGGCTGTTGCCAATGTCATTAGCTGTTGAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACG

SspI (2155)
SwaI (2169)

2101 TCTTCATTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGATAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAAT

EcoO109I (2230)

2201 GTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGG

BstXI (2459)

2301 ACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGCTGACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAG
 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

2401 CACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGC
 116▶ 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

2501 CTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCTGCCAATGTAGGCCT **StuI (2594)**
82 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 V T V R G I Y A E
2601 CAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCTCAGTGGC
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 (2740)
2701 GACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGA
16 V E V L E L D Q Q S I N F T K M
AseI (2802)
2801 TGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCG
SpeI (2957)
2901 CCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGAGAC
SnaBI (3085)
3001 TTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTG
NdeI (3190)
3101 CCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATAC
3201 ACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTA
PacI (3376)
3301 TTGACGTCAATGGGCGGGGTCGTTGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAA
SdaI (3368) BspLU11I (3386)
3401 GGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCTTGTGCGGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTC
3501 AGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATA
3601 CCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGT
ApaLI (3700)
3701 GTGCACGAACCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAG
3801 CCACTGGTAAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGG
3901 TATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGC
4001 AAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGGA
EagI (4136)
PacI (4116) SmaI (4125) NotI (4135)
4101 TTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAA
4201 CTAACATACGCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA