



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGGCCCGCCGCCCTACCTGAGGCC

HindIII (245) 301 GCCATCCACGCCGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

Bsu36I (291)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NgoMIV (441)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCCATGGATTACACGATGGAGCCCAACGTCACGATGACCGA

BstEII (555) 1▶ M D Y T M E P N V T M T D
AgeI (552) **NcoI (560)**

601 CTACTACCCTGATTTCTTACCGCCCCCTGTGACGCAGAGTTCCTCCTCAGGGGAGCATGCTGTATCTGGCCATCTTGTACTGCGTCTTGTTTGTGTGCTG

Bsu36I (645) 13▶ Y Y P D F F T A P C D A E F L L R G S M L Y L A I L Y C V L F V L

701 GGCCTTCTGGGAACAGCCTGGTTCATCTTAGTCTCGTGGGCTGCAAGAACTGAGGAGCATCACAGATATCTACCTCTGAACCTGGCCGCATCCGACC

EcoRV (766) 47▶ G L L G N S L V I L V L V G C K K L R S I T D I Y L L N L A A S D

801 TGCTTTTGTCTCTCTATTCCCTTTAGACCCACAACCTGTGGACCACTGGTGTGGGACTGCGATGTGAAGGTGGTCTTGGCCTTTATTACAT

80▶ L L F V L S I P F Q T H N L L D Q W V F G T A M C K V V S G L Y Y I

901 TGGTTTTTTCAGCAGTATGTTCTTCCATACCCTAATGAGTGTGACAGGTATCTGGCTATTGTCCACGCTGTCTATGCCATCAAGGTGAGGACGGCCAGC

113▶ G F F S S M F F I T L M S V D R Y L A I V H A V Y A I K V R T A S

1001 GTGGGCACAGCCCTGAGTCTGACAGTGTGGCTGGCTGTGTACAGCCACCATCCCCTTGATGGTTTTTTACCAAGTGGCCTCTGAAGACGGCATGCTAC

BbsI (1084) 147▶ V G T A L S L T V W L A A V T A T I P L M V F Y Q V A S E D G M L

1101 AATGTTTCCAGTTTTATGAAGAGCAGTCTTTGAGGTGGAAGCTCTTTACCCACTTTGAAATCAACGCCTTGGGTCTGCTGCTCCCTTTGCCATCCTCCT

SapI (1117) 180▶ Q C F Q F Y E E Q S L R W K L F T H F E I N A L G L L L P F A I L L

1201 GTTCTGCTATGTCAGGATCCTGCAGCAGCTGCGGGGCTGCCTGAACCACAACAGGACCAGAGCCATCAAGCTGGTGTCCACGTAGTCATTGTGTCTTTA

BamHI (1214) 213▶ F C Y V R I L Q Q L R G C L N H N R T R A I K L V L T V V I V S L

BstXI (1262)

1301 CTCTTCTGGGTCCATTCAACGTGGCCCTTTCTCAGTCCCTGCACGACCTGCACATCTTGATGGATGTGCCACGAGGCAGAGGCTGGCTCTGGCCA

SandI (1307) 247▶ L F W V P F N V A L F L T S L H D L H I L D G C A T R Q R L A L A

EcoO109I (1307)

1401 TCCATGTCACAGAGGTCATCTCTTTTACCCTGCTGCGTGAACCCCGTCATCTACGCTTACAGGAGAGAAGTTTAAAGAACACCTCATGGATGTGTT

MluI (1454) 280▶ I H V T E V I S F T H C C V N P V I Y A F I G E K F K K H L M D V F

1501 TCAAAAGAGCTGCAGCCACATCTTCTCTACTTAGGGAGACAAATGCCGTGGGGGCTTGGAAAGGCAGCTGTCTCGAACCAGCATCTTCCATTCT

313▶ Q K S C S H I F L Y L G R Q M P V G A L E R Q L S S N Q R S S H S

1601 TCCACCCTGGATGACATCTTGTAAAGGGAGTGTGCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGT

NheI (1636) 347▶ S T L D D I L •

1701 GAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTT

HpaI (1774) **MfeI (1785)**

1801 TATGTTTCAGGTTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTT

EcoRI (1870)

1901 AACCTCCAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTC

2001 ACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTTCTCATTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCT

SapI (2052)

2101 TTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATAT

SspI (2109) **Swal (2123)** **EcoO109I (2184)**

2201 CCCCAGTTTAGTGTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAG

141▶ • N R T Y K L

SacI (2384)

2301 GGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATG

134▶ P I L E E I T T K V L K G N M E I L V F C D P A Y D S I L E R C M

BstXI (2413)
2401 CCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAG
100 G C P S V V R I S 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

StuI (2548)
2501 CAGACCCAATGGCAATGGCTTACGACAGACAGAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCCTGATGCC
67 S G I A I A E A C V T V R G I Y A E I H V A S I I E G T K T R I A

BbsI (2694)
XmnI (2690)
2601 CGCCCCGACATGGTGTGTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTC
34 A G V H H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F T K

AseI (2756)
2701 ATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGA
0 M

SacI (2813)
2801 CGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGT

SpeI (2911)
2901 CCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTA

SnaBI (3039)
3001 CTGCCAAAACCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCATGTACTGGGCATAATGCCAG

NdeI (3144)
3101 GCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCC
3201 ATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCC

PacI (3330)
SdaI (3322) BspLU11I (3340)
3301 ATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGT
3401 TTTTCATAGGCTCCGCCCCCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCC
3501 CCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGC

ApaLI (3654)
3601 TCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGACGAAACCCCGTTCAGCCCAGCCGCTGCGCCTTATCCGGTA
3701 ACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTAC
3801 AGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGT
3901 AGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTT

EagI (4090)
PacI (4070) SwaI (4079) NotI (4089)
4001 TGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCGGCCGCAAT
4101 AAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAG
4201 CAAAATAGGCTGTCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTATCGAA