



PvuI (7)
SgfI (6)

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAATGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **BspHI (560)**

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGTCATCATGAAAGTCACAGGCATCACAATCCTTTTTGGCCCT

1▶ M K V T G I T I L F W P L

EcoRV (691)

601 CTCCATGATATTATTATCAGACAAAATCCAGTCTTCTAAAAGAGAAGTCCAATGTAATTTTACTGAAAAAATTATACCTTGATTCCAGCAGATATCAAG

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

701 AAAGATGTTACTATACTTGTACTCAGTATAACCAAATTAATCTTAATGGTACAGACACAAGAGTTCTACAGACATACTTTTTACTCACAGAGCTCTATT

47▶ K D V T I L D L S Y N Q I T L N G T D T R V L Q T Y F L L T E L Y

BstEII (841) **XbaI (855)**

801 TGATTGAGAACAAGTTACTATCTTACATAATAACGGTTTTGGTAACTCTCCAGCTAGAAAATTTTAAATATCTGTAGAAAATCCATCTATGTAATTC

80▶ L I E N K V T I L H N N G F G N L S S L E I L N I C R N S I Y V I Q

901 ACAGGGTGCATTTTTAGGCTTAAATAAACTAAAACAGTTATATCTCTGCCAAAACAAAATAGAACAACTGAATGCTGATGATTTGTGCTCTAAGAAGC

113▶ Q G A F L G L N K L K Q L Y L C Q N K I E Q L N A D V F V P L R S

1001 CTAACCTTCTGAATCTGCAAGCAATTTGATTAGCTATTTGGATGTACCACCACTATTTTCATCTGGAATTAATACTTTATATGAAACCTATGAACT

147▶ L K L L N L Q G N L I S Y L D V P P L F H L E L I T L Y G N L W N

DraIII (1170) **PstI (1195)**

1101 GCTCTGCAGTCTATTTAATTTGCAGAAGTGGTGAACACATCAAATGTGACATTAGAAAATGAGAACATCACCATGTGTAGCTACCCCAACAGCCTGCA

180▶ C S C S L F N L Q N W L N T S N V T L E N E N I T M C S Y P N S L Q

BglII (1269)

1201 GAGCTACAATATCAAAACAGTACCTCATAAGGCTGAATGCCACTCAAAATTTCTTTCATCAGTAACTGAAAGATCTTTATATTCATTTTCAGCCCATCAGC

213▶ S Y N I K T V P H K A E C H S K F P S S V T E D L Y I H F Q P I S

BstBI (1320)

1301 AATTCAATATTTAATAGCTCTTCGAACAACCTTAAACAAGAAATTCAGAACATGAACCTCTGGAAAAAGTTGGGCTTTTCTTGTGGTGTGTGTCCTG

247▶ N S I F N S S S N N L T R N S E H E P L G K S W A F L V G V V V T

1401 TACTGACGACTTCACTTCTCATTTTTATTGCTATCAAATGCCAATATGGTACAATATTCTGCTTAGTTATAATCATCATCGCTGGAAGAGCATGAAGC

280▶ V L T T S L L I F I A I K C P I W Y N I L L S Y N H H R L E E H E A

1501 AGAAACCTATGAAGATGGTTTTACTGGAAATCCAAGCTCTTTTACAGATACCAGAAAACAACTCTGAAGAAACTACAGTAATTTTGAACAATTACAT

313▶ E T Y E D G F T G N P S S L S Q I P E T N S E E T T V I F E Q L H

EcoRV (1645)

1601 TCATTTGTGGTAGATGATGATGGATTTATTGAAGACAAATATATAGATATCCATGAATTATGTGAAGAAAATTAATTTCTTTCAAAGTTTGCTTTTTAAA

347▶ S F V V D D D G F I E D K Y I D I H E L C E E N •

MscI (1706)

NheI (1700)

1701 GCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTA

HpaI (1838) **MfeI (1849)**

1801 TTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTT

EcoRI (1934)

1901 TTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCT

2001 GAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATATAGTGATTTT

SwaI (2187)

2101 CCCAAGGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAATAATTTAAATACATC

EcoO109I (2248)

2201 ATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGA

2301 ACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTT

141▶ • N R T Y K L P I L E E I T T K V L K

BstXI (2477)

2401 GCCATTCTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACC

122▶ 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 R D V

2501 TCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGA
88 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 V T V
StuI (2612)

2601 CCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTTCCTCATAGAGCAT
55 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 Y L M
XmnI (2754)

2701 GGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTAT
22 T I K E T A V E V L E L D Q Q S I N F T K M
2801 GCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCC

2901 CACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGA
SpeI (2975)

3001 CGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGAC

3101 TAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGC
SnaBI (3103)

3201 GTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTA
NdeI (3208)

3301 TGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAATT
PacI (3394)
PstI (3387)
SdaI (3386)

3401 AAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA
BspLU11I (3404)

3501 AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGAC
3601 CCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTCGTT

3701 CGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCCCACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGTAAGACACGACT
ApaLI (3718)

3801 TATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACAC
3901 TAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGC
4001 GGTGGTTTTTTTGTGGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACG

4101 AAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGT
EagI (4154)
PacI (4134) SwaI (4143) NotI (4153)

4201 TTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCA
4301 GAACATTTCTCTATCGAA