



PvuI (7)
SgfI (6) **EcoNI (96)**
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
PvuII (239) **EcoNI (287)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTACCATTGGATTTTCAAGGGTCAGTCCGACCTATAGCTATGA
1 M D F Q G S V P T Y S Y D

ClaI (601)
601 CATCGATTATGGTATGTCAGCACCTGCCAAAAATCAATGTAAACAAATTGCGGCTCAGCTCCTGCCCCACTCTACTCCCTGGTATTCATCTTTGGT
13 I D Y G M S A P C Q K I N V K Q I A A Q L L P P L Y S L V F I F G

BbsI (718) **EcoRV (763)** **MscI (782)**
701 TTTGTGGTAACATGATGGTCTTCTCATCTTGATAAGCTGCAAAAAGCTGAAGAGCGTGACTGATATCTACCTGCTCAACCTGGCCATCTCTGACCTGC
47 F V G N M M V F L I L I S C K K L K S V T D I Y L L N L A I S D L
801 TCTTCTGCTCAGCTACACTACCTTCTGGGCTCACTATGCTGCAAAAGAGTGGGCTTTGGGAACATAATGTAAAGTATTACAGGGCTCTATCACATTGG
80 L F L L T L P F W A H Y A A N E W V F G N I M C K V F T G L Y H I G
901 TTATTTTGGTGAATCTTCTTATTATCTCTGACAATTGATAGGTAAGTGGCTATTGTCCATGCTGTGTTTGTCTTAAAGTCAAGACGGTCAACTTT
113 Y F G G I F F I I L L T I D R Y L A I V H A V F A L K V R T V N F

BglII (1069)
1001 GGGGTATAACAAGTGTAGTCACTTGGGCGGTGGCTGTGTTTGCCTCTCTCCAGAAATAATCTTTACCAGATCTCAGAAAGAAGGTTTTTATTATACAT
147 G V I T S V V T W A V A V F A S L P E I I F T R S Q K E G F H Y T

BsaBI (1158)
1101 GCAGTCTCATTTTCCACACACTCAGTATCATTCTGGAAGAGTTTCCAAACATAAAGATGGTCATCTTGGAGCTGATCCTGCCTCTACTTGTGATGGT
180 C S P H F P H T Q Y H F W K S F Q T L K M V I L S L I L P L L V M V

BspHI (1286)
1201 CATCTGCTACTCAGGAATTCTCCACACCCTGTTTCGCTGTAGGAATGAGAAGAAGAGGCACAGGGCTGTGAGGCTCATCTTTGCCATCATGATTGTCTAC
213 I C Y S G I L H T L F R C R N E K K R H R A V R L I F A I M I V Y

XcmI (1347) **PstI (1371)**
1301 TTTCTCTTCTGGACTCCCTACAACATTGCTCTCTCTGACCACCTTCCAGGAATTCTTTGGACTGAATAACTGCAGTAGTTCTAATAGACTAGACCAGG
247 F L F W T P Y N I V L L L T T F Q E F F G L N N C S S S N R L D Q

BspEI (1478)
1401 CCATGCAGGCAACAGAGACTCTTGAATGACACACTGCTGCCTAAACCCTGTCTATGCTCTTGTGGAGAGAAGTTCGGAGTTATCTCTCAGTGT
280 A M Q A T E T L G M T H C C L N P V I Y A F V G E K F R S Y L S V F
1501 CTTCCGAAAACACATGGTCAAACGCTTTTGCAAACGGTGTCAATTTTCCAGCAAGACAATCCTGATCGTCAAGCTCAGTCTATACCGATCCACAGGA
313 F R K H M V K R F C K R C S I F Q Q D N P D R A S S V Y T R S T G

MscI (1687)
1601 GAACATGAAGTTTCTACTGGTTTATGACCTGGTTGACTTTTGTGATCACGTAGTTTTCTATGCAGCTTGGGAGTAGGAAGCTAGCTGGCCAGACATGA
347 E H E V S T G L •

NheI (1681)
1701 TAAGATACATTGATGAGTTTGGACAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCAT

HpaI (1819)
1801 TATAAGCTGCAATAAACAAGTTAAACAACAATTCATTCTTTTATGTTTCAGGTTGAGGGGAGGTGGGAGGTTTTTAAAGCAAGTAAACCTC
1901 TACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATA
2001 GGCATCAGGGGCTGTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTATTTTCCCAAGGTTTGAAGTAGCT

SspI (2154) **Swal (2168)**
2101 CTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATG

EcoO109I (2229)
2201 TTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGA
2301 CAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTTCCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGC
1-1-1 • 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 (2429) **BstXI (2458)**
2401 ACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCC
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 (2593)
2501 TGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTC
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

2601 AATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCTCAGTGGCG
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

2701 ACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGAT
15 V E V L E L D Q Q S I N F T K M

2801 GATTAATTGTCAA AACAGCGTGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGC
AseI (2801) SacI (2858)

2901 CCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACT
SpeI (2956)

3001 TGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGGATGACTAATACGTAGATGTACTGC
SnaBI (3084)

3101 CAAGTAGGAAAGTCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACA
NdeI (3189)

3201 CTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTAT

3301 TGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAATTAAGAACATGTGAGCAAAG
PstI (3368) SdaI (3367) BspLU11I (3385)

3401 GCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCA

3501 GAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATAC

3601 CTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTG
ApaLI

3701 TGCACGAACCCCCGTTACGCCGACCGCTGCGCTTATCCGTAACATATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGC

3801 CACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGT

3901 ATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTGTGTTGCA

4001 AGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGAT

4101 TTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAAC
PacI (4115) SwaI (4124) EagI (4135) NotI (4134)

4201 TAACATACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA