



100

PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA **EcoNI (96)**
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 **PvuII (239)** **Bsu36I (291)**
201 **EcoNI (287)** GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NaeI (441)
NgoMIV (441) 401 GGGCCTTTGTCCGGCGCTCCCTTGAGAGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (568)**
501 TCTGTTTGGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTAGGAGGGCCATCATGATTGACAGACAGAGAATGGGACTTTGG
1 M I D R Q R M G L W
601 GCTTTGGCAATTCTGACACTTCCATGTATTTGACAGTTACGGAGGGCAGTAAATCGTCTGGGGTCTGGAAAATGAGGCTTTAATTGTGAGATGCCCC
11 A L A I L T L P M Y L T V T E G S K S W G L E N E A L I V R C P

XmnI (750)
701 AAAGAGGACGCTCGACTTATCCTGTGGAATGGTATTACTCAGATACAAATGAAAGTATTCCTACTCAAAAAGAAATCGGATCTTTGTCTCAAGAGATCG
44 Q R G R S T Y P V E W Y Y S D T N E S I P T Q K R N R I F V S R D R
801 TCTGAAGTTTCTACCAGCCAGAGTGAAGACTCTGGGATTTATGCTTGTGTTATCAGAAGCCCCAACTGAATAAGACTGGATACTTGAATGTCACCATA
77 L K F L P A R V E D S G I Y A C V I R S P N L N K T G Y L N V T I
901 CATAAAAAGCCGCAAGCTGCAATATCCCTGATTATTTGATGACTCGACAGTACGTGGATCAGATAAAAAATTCAAGATAACGTGTCCAACAATTGACC
111 H K K P P S C N I P D Y L M Y S T V R G S D K N F K I T C P T I D
1001 TGTATAATTGGACAGCACCTGTTCAAGTGGTTAAGAACTGCAAAGCTCTCAAGAGCCAAAGTTTCAGGGCACACAGGTCCTACTTGTTCATTGACAACGT
144 L Y N W T A P V Q W F K N C K A L Q E P R F R A H R S Y L F I D N V

BbrPI (1140)
1101 GACTCATGATGATGAAGGTGACTACACTTGTCAATTCACACACGTGGAGAATGGAACCAACTACATCGTGACC GCCACCAGATCATTACAGTTGAAGAA
177 T H D D E G D Y T C Q F T H V E N G T N Y I V T A T R S F T V E E
1201 AAAGGCTTTTCTATGTTTCCAGTAATTACAAATCCTCCATACAACCACACAATGGAAGTGGAAATAGGAAAACAGCAAGTATTGCTGTTGAGCTTGTCT
211 K G F S M F P V I T N P P Y N H T M E V E I G K P A S I A C S A C

EcoRI (1378)
1301 TTGGCAAAGGCTCTCACTTCTGGCTGATGTCCTGTGGCAGATTAACAAAACAGTAGTTGAAATTTTGGTGAAGCAAGAATCAAGAAGAGGAAAGTGC
244 F G K G S H F L A D V L W Q I N K T V V G N F G E A R I Q E E E G R

XcmI (1411)
1401 AAATGAAAGTTCCAGCAATGACATGAGTATGTTTAACTCAGTGTAAAGGATAACTGGTGTGACAGAAAAGGACCTGTCCTGGAATATGACTGTCTGGCC
277 N E S S S N D M D C L T S V L R I T G V T E K D L S L E Y D C L A

NheI (1598)
1501 CTGAACCTTCATGGCATGATAAGGCACACCATAAGACTGAGAAGGAAACAACCAAGTAAGGAGTGTCCCTCACACATTGCTTGAATAAAT GGCTGAATGC
311 L N L H G M I R H T I R L R R K Q P S K E C P S H I A •

MscI (1604)
1601 TAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATT

HpaI (1736)
1701 GCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGTTTTTT

EcoRI (1832)
1801 AAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGA
1901 GGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTATTTTCC

SspI (2071) **Swal (2085)**
2001 CAAGGTTTGAAGTCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGTAATAATTCAGAAATAATTTAAATACATCAT
2101 TGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAAC
2201 CTTAATAGAAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGC
141 • N R T Y K L P I L E E I T T K V L K G

SacI (2346) **BstXI (2375)**
2301 CATTCACTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCCTGATGGATCTGTCCACCTC
121 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 E
2401 ATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGCAATGGCTTCAGCAGACAGTGAAC
88 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 (2510)
Eco147I (2510) 2501 CTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGCTCCTCATAGAGCATGG
54 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 T

XmnI (2652) **BspHI (2660)**
2601 TGATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGC
21 I K E T A V E V L E L D Q Q S I N F T K M

2701 **AseI (2718)** **SacI (2775)**
 CGATATACTATGCCGATGATTAATTGTCAA AACAGCGTGGATGGCGTCTCCAGC T TATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCA

2801 **SpeI (2873)**
 CCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGAC

2900 GTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACT

SnaBI (3001)
Eco105I (3001)
 3000 AATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTACTGTACTGGGCATAATGCCAGGCGGGCCATTACCCTCATTGACGTCAATAGGGGGCG

NdeI (3106)
 3100 TACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTAT

PstI (3285)
SdaI (3284)**PacI (3292)**
 3200 GGGACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCTGCAGGTTAA T

BspLU11I (3302)
 3298 TAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCGCGTGTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAC

3398 AAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCCGA

3498 CCTGCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGT

ApaLI (3616)
 3598 TCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGAC

3698 TTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACA

3798 CTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGA AAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCCGCTGGTAG

3898 CGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAC

EagI (4052)
PacI (4032) **SwaI (4041)** **NotI (4051)**
 3998 GAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGG

4098 TTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCC

4198 AGAACATTTCTCTATCGAA