



PvuI (7) SgfI (6) MfeI (82)
 1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCCGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
 Psp1406I (203) PvuII (239) Bsu36I (291)
 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCCGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) BspHI (560) PshAI (585)
 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGGTCATCATGAAAAAGCCTGAACTCACCGCGACGCTGTGTCGAGAA
 1▶ M K K P E L T A T S V E K

Tth111I (619)
 601 GTTCTGATCGAAAAGTTCGACAGCGTCTCCGACCTGATGCAGCTCTCGGAGGGCGAAGAATCTCGTGCTTTCAGCTTCGATGTAGGAGGGCGTGGATAT
 13▶ F L I E K F D S V S D L M Q L S E G E E S R A F S F D V G G R G Y
 701 GTCTGCGGGTAAATAGCTGCGCGATGGTTTCTCAAAGATCGTTATGTTTATCGGCACTTTCATCGGCGCGCTCCCGATTCCGGAAGTCTTGACA
 47▶ V L R V N S C A D G F Y K D R Y V Y R H F A S A A L P I P E V L D

DraIII (845)
 801 TTGGGAATTCAGCGAAGCCTGACCTATTGCATCTCCCGCGTGCACAGGGTGTACGTTGCAAGACCTGCCTGAAACCGAACTGCCGCTGTTCTGCA
 80▶ I G E F S E S L T Y C I S R R A Q G V T L Q D L P E T E L P A V L Q

PvuI (923) SgfI (922) RsrII (969)
 901 ACCCGTCGCGGAGCTCATGGATGCGATCGCTGCGGCCGATCTTAGCCAGACGAGCGGGTTCGGCCATTTCGGACCGCAAGGAATCGGTCAATACACTACA
 113▶ P V A E L M D A I A A A D L S Q T S G F G P F G P Q G I G Q Y T T

NdeI (1011) Tth111I (1063)
 1001 TGGCGTATTTTCATATGCGCGATTGCTGATCCCATGTGTATCACTGGCAAATGTGATGGACGACACCGTCAGTGCCTCGTCCGCGAGGCTCTCGATG
 147▶ W R D F I C A I A D P H V Y H W Q T V M D D T V S A S V A Q A L D

DraIII (1138)
 1101 AGCTGATGCTTTGGGCCGAGGACTGCCCGAAGTCCGGCACCTCTGCACGCGGATTTCCGGTCCAACAATGTCTGACGGACAATGGCCGCATAACAGC
 180▶ E L M L W A E D C P E V R H L V H A D F G S N N V L T D N G R I T A
 1201 GGTCATTGACTGGAGCGAGCGATGTTCCGGGATCCCAATACAGAGTGCCTCAACATCTTCTTGGAGGCGTGGTTGGCTTGATGGAGCAGCAGACG
 213▶ V I D W S E A M F G D S Q Y E V A N I F F W R P W L A C M E Q Q T

SacII (1339)
 1301 CGCTACTTCGAGCGGAGGCATCCGGAGCTTGCAAGATCGCCGCGGCTCCGGCGTATATGCTCCGATTGGTCTTGACCAACTCTATCAGAGCTTGGTTG
 247▶ R Y F E R R H P E L A G S P R L R A Y M L R I G L D Q L Y Q S L V
 1401 ACGGCAATTCGATGATGCAGCTTGGCGCAGGGTTCGATGCGACGCAATCGTCCGATCCGGAGCCGGGACTGTCCGGCGTACACAAATCGCCCGAGAAG
 280▶ D G N F D D A A W A Q G R C D A I V R S G A G T V G R T Q I A R R S

ScaI (1530) NheI (1599)
 1501 CGCGCGCTGCGACCGATGGCTGTGTAGAAGTACTCGCCGATAGTGGAAACCGACGCCCCAGCACTCGTCCGAGGGCAAAGGAATGAGTCGAGAATTCG
 313▶ A A V W T D G C V E V L A D S G N R R P S T R P R A K E •

MscI (1605)
 1601 CTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTAT

HpaI (1737) MfeI (1748)
 1701 TGCTTTATTTGTAACCATTATAAGTGAATAAACAAGTTAAACAACAACAATTGCATTATTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTT
 1801 TAAAGCAAGTAAACCTCTACAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAACTCTTTCTG

1901 AGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTTAAAGATATAGTGTATTTTC

SapI (2015) SspI (2072) SmaI (2086)
 2001 CCAAGTTTGAACCTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCA

EcoO109I (2147)
 2101 TTGCAATGAAAATAAATGTTTTTATTAGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAA

2201 CCTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTG
 141▶ • N R T Y K L P I L E E I T T K V L K

BstXI (2376)
 2301 CCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCT
 121▶ 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 E
 2401 CATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTAC
 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

2501 **StuI (2511)**
CCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGCTCATAGAGCATG
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

2601 **BbsI (2657)**
XmnI (2653)
GTGATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCTATTACTATG
21 T I K E T A V E V L E L D Q Q S I N F T K M

2701 **AseI (2719)**
CCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCTCCC

2801 **SpeI (2874)**
ACCGTACACGCCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGAC
2901 GTC AATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCAGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACT

3001 **SnaBI (3002)**
AATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCG

3101 **NdeI (3107)**
TACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTAT

3201 **PacI (3293)**
PstI (3286)
SdaI (3285)
GGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAAITTA

3301 **BspLU11I (3303)**
AGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAA

3401 AAATCGACGCTCAAGTCAAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACC

3501 CTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCC

3601 GCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGTGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTT

3701 ATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACT

3801 AGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCGCTGGTAGCG

3901 GTGGTTTTTTTTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGA

4001 **PacI (4033) SwaI (4042) NotI (4052)**
AAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTT

4101 TTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAG

4201 AACATTTCTCTATCGAA