



PvuI (7)
SgfI (6)
 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTATGTCGTGTACTGGCTCCGCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
 201 GTGAACGTTCTTTTTTCGAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555) **BstBI (567)**
AgeI (552) **NcoI (560)**
 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCATGGATTGAAATATCAGTGTGTGAAGCTGAATGATGG
 1▶ M D S K Y Q C V K L N D G

PstI (638) **BstXI (671)**
 601 TCACTTCATGCCTGTCCTGGGATTTGGCACCTATGCGCCTGCAGAGGTTCTAAAAGTAAAGCTTTAGAGGCCACCAAATTGGCAATTGAAGCTGGCTTC
 13▶ H F M P V L G F G T Y A P A E V P K S K A L E A T K L A I E A G F

BbsI (790)
 701 CGCCATATTGATTCTGCTCATTATACAATAATGAGGAGCAGGTTGGACTGGCCATCCGAAGCAAGATTGCAGATGGCAGTGTGAAGAGAGAAGACATAT
 47▶ R H I D S A H L Y N N E E Q V G L A I R S K I A D G S V K R E D I
 801 TCTACACTTCAAAGCTTTGGTGAATTCCCATCGACCAGAGTTGGTCCGACCAGCCTTGAAAAGTCACTGAAAAATCTTCAATTGGATTATGTTGACCT
 80▶ F Y T S K L W C N S H R P E L V R P A L E R S L K N L Q L D Y V D L

BbrPI (999)
 901 CTACCTTATTCATTTTCCAGTGTCTGTAAGCCAGGTGAGGAAGTATCCAAAAGATGAAAAATGAAAAATACTATTTGACACAGTGGATCTCTGTGCC
 113▶ Y L I H F P V S V K P G E E V I P K D E N G K I L F D T V D L C A

PvuII (1075)
 1001 ACGTGGGAGGCCGTGGAGAAGTGTAAAGATGCAGGATTGGCCAAGTCCATCGGGGTGTCACACTTCAACCGCAGGCAGCTGGAGATGATCCTCAACAAGC
 147▶ T W E A V E K C K D A G L A K S I G V S N F N R R Q L E M I L N K
 1101 CAGGGCTCAAGTACAAGCCTGTCTGCAACCAGGTGGAATGTCATCCTTACTTCAACAGAGAAAACTGCTGGATTTCTGCAAGTCAAAGACATTGTTCT
 180▶ P G L K Y K P V C N Q V E C H P Y F N Q R K L L D F C K S K D I V L

Tth111I (1273) **EcoO109I (1271)**
 1201 GGTTCCTATAGTCTCTGGGATCCCACCGAGAAGAACCATGGGTGGACCCGAACCTCCCGGTGCTCTTGGAGGACCCAGTCCCTTTGTGCCTTGGCAAAA
 213▶ V A Y S A L G S H R E E P W V D P N S P V L L E D P V L C A L A K

XcmI (1338)
 1301 AAGCACAAGCGAACCCAGCCCTGATTGCCCTGCGCTACCAGCTGCAGCGTGGGGTTGTGGTCTGGCCAAGAGCTACAATGAGCAGCGCATCAGACAGA
 247▶ K H K R T P A L I A L R Y Q L Q R G V V V L A K S Y N E Q R I R Q

EcoRI (1414)
 1401 ACGTGCAGGTGTTTGAATCCAGTTGACTTCAGAGGAGATGAAAGCCATAGATGGCCTAAACAGAAATGTGCGATATTTGACCCTTGATATTTTTGCTGG
 280▶ N V Q V F E F Q L T S E E M K A I D G L N R N V R Y L T L D I F A G

SspI (1526) **NheI (1545)**
 1501 CCCCCTAATTATCCATTTTCTGATGAATATTAACATGGAGGCGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAAC
 313▶ P P N Y P F S D E Y •

HpaI (1683)
 1601 GAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTG

EcoRI (1779)
 1701 CATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAATACAGCATAG
 1801 CAAAACCTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTT

SapI (1961)
 1901 TGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTCCCAAGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCC

SspI (2018) **Swal (2032)** **EcoO109I (2093)**
 2001 ACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCT
 2101 TCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGT
 141▶ • N R T

SacI (2293)
 2201 GTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCT
 137▶ Y K L 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

BstXI (2322)
 2301 CTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGT
 103▶ R C M 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

R C M 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

StuI (2457)

2401 TGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGT
70 S V A 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

XmnI (2599)

2501 CCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTG
37 R I A 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

BbsI (2603)

AseI (2665)

2601 AAGGTCCTCATGGTGGCCCTCTATAGTGAGTCGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAG
3 F T K M

SacI (2722)

2701 CTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATT

SpeI (2820)

2801 TTGGAAAGTCCCCTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGAGACTTGAAATCCCCTGAGTCAAACCGCTATCCACGCC

SnaBI (2948)

2901 ATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCA

NdeI (3053)

3001 TAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAAT

3101 ACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGCGCC

PacI (3239)

PstI (3232)

SdaI (3231)

BspLUIII (3249)

3201 AGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGAAAAGGCCAGGAACCGTAAAAAGGCCGCT

3301 TGCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCA

3401 GGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTT

ApaLI (3563)

3501 TCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCT

3601 TATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGG

3701 CGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAA

3801 AGAGTTGGTAGCTCTTGATCCGGCAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAG

EagI (3999)

PacI (3979) SmaI (3988) NotI (3998)

3901 AAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGC

4001 GGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAA

4101 ACAAACTAGCAAAATAGGCTGTCCCGTGAAGTGCAGGTGCCAGAATTTCTCTATCGAA