



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82) EcoNI (96)

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) **Bsu36I (291)**
PvuII (239) EcoNI (287)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

AgeI (552) NcoI (570) XcmI (594)
SgrAI (551)

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTGAAGGAGGCCACCATGGCAGAAGTACCTGAGCTCGCCAGTG
1► M A E V P E L A S

601 AAATGATGGCTTATTACAGTGGCAATGAGGATGACTTGTCTTTGAAGCTGATGGCCCTAAACAGATGAAGTGTCTTCCAGGACCTGGACCTTGCCC
10► E M M A Y Y S G N E D D L F F E A D G P K Q M K C S F Q D L D L C P

EcoO109I (681)

701 TCTGGATGGCGGCATCCAGTACGAATCTCCGACCACCTACAGCAAGGGCTTCAAGCAGGCGCGTCAAGTGTGGCCATGGACAAGCTGAGGAAG
43► L D G G I Q L R I S D H H Y S K G F R Q A A S V V V A M D K L R K

801 ATGCTGGTTCCCTGCCACAGACCTTCCAGGAGAATGACCTGAGCACCTTCTTCCCTTCATCTTTGAAGAAGAACTATCTTCTCGACACATGGGATA
77► M L V P C P Q T F Q E N D L S T F F P F I F E E E P I F F D T W D

901 ACGAGCTTATGTGCACGATGCACCTGTACGATCACTGAAGTGCACGCTCCGGGACTCACAGCAAAAAGCTTGGTGTCTGGTCCATATGAAGTAA
110► N E A Y V H D A P V R S L N C T L R D S Q Q K S L V M S G P Y E L K

BsrGI (1057)

1001 AGCTCTCCACCTCCAGGGACAGGATATGGAGCAACAAGTGGTGTCTCCATGTCTTTGTACAAGGAGAAGAAAGTAATGACAAAATACCTGTGGCCTTG
143► A L H L Q G Q D M E Q Q V V F S M S F V Q G E E S N D K I P V A L

XcmI (1152)PvuII (1160)

1101 GGCCTCAAGGAAAAGAATCTGTACTGTCTGCGTGTGAAAGATGATAAGCCACTCTACAGCTGGAGAGTGTAGATCCAAAAATTACCCAAAGAAGA
177► G L K E K N L Y L S C V L K D D K P T L Q L E S V D P K N Y P K K

BsaBI (1228)

1201 AGATGAAAAGCGATTTGTCTTCAACAAGATAGAATCAATAACAAGCTGGAATTTGAGTCTGCCAGTTCSSCAACTGGTACATCAGCACCTCTCAAGC
210► K M E K R F V F N K I E I N N K L E F E S A Q F P N W Y I S T S Q A

1301 AGAAAACATGCCCGTCTTCTGGGAGGACCAAGGCGCCAGGATATAACTGACTTCACCATGCAATTTGTGTCTTCTTAAAGAGAGCTGTACCCAGAG
243► E N M P V F L G G T K G G Q D I T D F T M Q F V S S •

MscI (1410)

NheI (1404)

1401 AGTCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGAT

HpaI (1542) MfeI (1553)

1501 GCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGG

EcoRI (1638)

1601 TTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTT
1701 TTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGA

SapI (1820) **SspI (1877)** SmaI (1891)

1801 TTTTCCAAGGTTTGAAC TAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATA

EcoO109I (1952)

1901 CATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAA

2001 AGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCA
141► • N R T Y K L P I L E E I T T K V L

BstXI (2181)

2101 GCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTC
123► K 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

2201 CACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACA
90► V 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

StuI (2316)

2301 GTGACCCTGCAATGTAGGCCTCAATGTGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCATAGA
56► T V 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

BspHI (2466)

XmnI (2458)

2401 GCATGGTGTCTTCTCAGTGGGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGTGATTATA
23► M T I K E T A V E V L E L D Q Q S I N F T K M

2501 **AseI (2524)**
 CTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCTGCTTATATAGAC

2601 **SpeI (2679)**
 CCCCCACGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCA

2701 **SnaBI (2807)**
 TTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGA

2801 **NdeI (2912)**
 TGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGG

2901 **PacI (3098)**
 GGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTT

3001 **PstI (3091)**
 ACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTT

3101 **BspLU11I (3108)**
 AATTAAGAACATGTGAGCAAAAGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCAT

3201 **SdaI (3090)**
 CACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCTGGAAAGCTCCCTCGTGGCTCTCCTGTTCC

3301 **NotI (3857)**
 CGACCCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGT

3401 **EagI (3858)**
 CGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACAC

3501 **PacI (3838)**
 GACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCT

3601 **Swal (3847)**
 AACTAGAGAAGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCGCTGG

3701 **NotI (3857)**
 TAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGG

3801 **EagI (3858)**
 ACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGT

3901 **NotI (3857)**
 TGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTCAAGTGCAGGT

4001 **NotI (3857)**
 GCCAGAACATTTCTATCGAA