



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

MfeI (82)
101 GAGAAAGTGGCGCGGGTAAACTGGGAAAGTATGTCGTGACTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGGCC

PvuII (239)
Bsu36I (291) 301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAATGCGTCCCGCTTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **NcoI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGGCTCGGGCGACACCCTCTACATCGCCACGGACGG

1► M A S G D T L Y I A T D G
601 CTCGGAGATGCCGCGGAGATCGTGGAGCTGCACGAGATCGAGGTGGAGACCATCCCGTGGAGACCATCGAGACCACAGTGGTGGCGGAGGAGGAG
13► S E M P A E I V E L H E I E V E T I P V E T I E T T V V G E E E E
701 GAGGACGACGACGACGAGGACGGCGGGTGGCGACCACGGCGGGGGCGGCCACGGGCACGCCGGCCACCACCACCACCACCACCACCACCACC
47► E D D D D E D G G G G D H G G G G G H G H A G H H H H H H H H

PstI (817)
801 ACCCGCCATGATCGCTCGCAGCCGCTGGTCACCGACGACCCGACCCAGGTGCACCACCACCAGGAGGTGATCCTGGTGCAGACGCGGAGGAGGTGGT
80► H P P M I A L Q P L V T D D P T Q V H H H Q E V I L V Q T R E E V V

BssHII (924) **BsaBI (951)**
901 GGGCGGCGACGACTCGGACGGCTGCGCGCCGAGGACGGCTTCGAGGATCAGATTCTCATCCCGTGGCCGCGCCGGCGGGCGGACGACTACATT
113► G G D D S D G L R A E D G F E D Q I L I P V P A P A G G D D D Y I

NotI (1067) **SapI (1095)**
1001 GAACAAACGCTGGTCACCGTGGCGGCGCCGGCAAGAGCGGCGGGCGGCTCGTCGTCGTCGGGAGGCGGCGCGCTCAAGAAGGGCGGCGGCAAGAAGA
147► E Q T L V T V A A A G K S G G G G S S S S G G R V K K G G G K K

XmaI (1158)
1101 GCGGAAGAAGAGTTACCTCAGCGGCGGGCCGGCGGGCGGGCGGCGGCCGACCCGGCAACAAGAAGTGGGAGCAGAAGCAGGTGCAGATCAA
180► S G K K S Y L S G G A G A A G G G G A D P G N K K W E Q K Q V Q I K

DraIII (1224)
1201 GACCCTGGAGGGCGAGTTCTCGTCCACCATGTGGTCTCAGATGAAAAAAGATATTGACCATGAGACAGTGGTTGAAGAACAGATCATTGGAGAGAAC
213► T L E G E F S V T M W S S D E K K D I D H E T V V E E Q I I G E N

BstAPI (1390)
1301 TCACCTCTGATTATTAGAATATATGACAGGAAAGAACTTCTCTCTGGAGGAATACCTGGCATTGACCTCTCAGATCCCAAACAACCTGGCAGAATTTG
247► S P P D Y S E Y M T G K K L P P G G I P G I D L S D P K Q L A E F
1401 CTAGAATGAAGCAAGAAAAATTAAGAAGATGATGCTCAAGAACAATAGCTTGCCTCATAAAGGCTGCACAAAGATGTTCAAGGATAACTCGGCCAT
280► A R M K P R K I K E D D A P R T I A C P H K G C T K M F R D N S A M

HindIII (1556)
1501 GAGAAAACATCTGCACACCCACGGTCCCAGAGTCCACGTCTGTGCAGAATGTGGCAAAGCTTTTGTGAGAGTTCAAACATAAACACCACTGGTT
313► R K H L H T H G P R V H V C A E C G K A F V E S S K L K R H Q L V

BstBI (1630) **FspI (1670)**
1601 CATACTGGAGAGAAGCCCTTTCAGTGCACGTTTGAAGGCTGTGGGAAACGCTTTTCACTGGACTTCAATTTGCGCACACATGTGCGAATCCATACCGGAG
347► H T G E K P F Q C T F E G C G K R F S L D F N L R T H V R I H T G

EcoO109I (1702)
1701 ACAGGCCCTATGTGTGCCCTTCGATGGTTGTAATAAGAAGTTTGTCTCAGTCAACTAACCTGAAATCTCACATCTTAACATGCTAAGGCCAAAAACAA
380► D R P Y V C P F D G C N K K F A Q S T N L K S H I L T H A K A K N N

MscI (1813)
NheI (1807)
1801 CCAGTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTAAAAAATGCTTTATTTGTGAAATTTGT
413► Q •

HpaI (1945) **MfeI (1956)**
1901 GATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACCAATTGCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGG

EcoRI (2041)
2001 AGGTTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTTAACCTCAAATCAAGCCTCTACTTGAATC

2101 CTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTGGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTTTCATGGAGTTAAGATATAGT

SapI (2223) **SspI (2280)** **SwaI (2294)**
2201 GTATTTTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCAGTACCTCCACATCCCTTTTTAGTAAAAATTTTCAAGAAATAATTTAA

EcoO109I (2355)
2301 ATACATCATTGCAATGAAAAATAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAA

2401 CAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGA
141 • N R T Y K L P I L E E I T T K V
SacI (2555)

2501 CCAGCTTGCCATTTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCT
124 L 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

2601 GTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAG
91 D 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
StuI (2719)

2701 ACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGCCTCAT
57 V 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
BbsI (2865)

2801 AGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCCTATAGTGAGTCGTATT
24 L M T I K E T A V E V L E L D Q Q S I N F T K M
XmnI (2861)

2901 A T A C T A T G C C G A T A T A C T A T G C C G A T G A T T A A T T G T C A A A C A C G C T G G A T G G C G T C T C C A G C T T A T C T G A C G G T T C A C T A A A C G A G C T C T G C T T A T A T A
AseI (2927) SacI (2984)

3001 G A C C T C C C A C C G T A C A C G C T A C C G C C A T T T G C G T C A A T G G G G C G G A G T T G T T A C G A C A T T T G G A A A G T C C C G T T G A T T A C T A G I C A A A A C A A A C T C
SpeI (3082)

3101 C C A T T G A C G T C A A T G G G G T G G A G A C T T G G A A A T C C C C G T G A G T C A A A C C G T A T C C A C G C C A T T G A T G T A C T G C C A A A C C G C A T C A T C A T G G T A A T A G

3201 C G A T G A C T A A T A C G T A G A T G T A C T G C C A A G T A G G A A A G T C C C A T A A G G T C A T G T A C T G G G C A T A A T G C C A G G C G G G C A T T T A C C G T C A T T G A C G T C A A T
SnaBI (3210)

3301 A G G G G G C G T A C T T G C A T A T G A T A C A C T T G A T G T A C T G C C A A G T G G G C A G T T A C C G T A A A T A C T C C A C C A T T G A C G T C A A T G G A A A G T C C C T A T T G G C
NdeI (3315)

3401 G T T A C T A T G G G A A C A T A C G T C A T T A T T G A C G T C A A T G G G C G G G G T C G T T G G G C G G T C A G C C A G G C G G G C A T T T A C C G T A A G T T A T G T A A C G C T G C A G
PstI (3494) SdaI (3493)

3501 G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G A A A A G G C C A G A A C C G T A A A A A G G C C G C G T T G C T G G C G T T T T C C A T A G G C T C C G C C C C C T G A C G A G
PacI (3501) BspLU11I (3511)

3601 C A T C A C A A A A A T C G A C G C T C A A G T C A G A G G T G G C G A A A C C C G A C A G G A C T A T A A A G A T A C C A G G C G T T T C C C C T G G A A G C T C C C T C G T G C G C T C T C T G

3701 T T C C G A C C T G C C G C T T A C C G G A T A C C T G T C C G C T T T C T C C T T C G G A A G C G T G G C G C T T T C T A T A G C T C A C G C T G T A G T A T C T C A G T T C G G T G T A

3801 G G T C G T T C G C T C A A G C T G G G C T G T G T G C A G A A C C C C G T T C A G C C G A C C G C T G C G C T T A T C C G G T A A C T A T C G T C T T G A G T C C A A C C G G T A A G A

3901 C A C G A C T T A T C G C C A C T G G C A G C A G C C A C T G G T A A C A G G A T T A G C A G A G C A G G T A T G T A G G C G G T A C A G A G T T C T T G A A G T G G T G G C C T A A C T A C G

4001 G C T A C A C T A G A A G A A C A G T A T T T G G T A T C T G C G C T C T G C T G A A G C C A G T T A C C T T C G G A A A A G A G T T G G T A G C T C T T G A T C C G G C A A A C A A C C A C C G C

4101 T G G T A G C G G T G G T T T T T T G T T T G A A G C A G C A G A T T A C G C G A G A A A A A A G G A T C T C A A G A A G A T C C T T T G A T C T T T T C T A C G G G G T C T G A C G C T A G

4201 T G G A A C G A A A A C T C A C G T T A A G G G A T T T T G G T C A T G G C T A G T T A A T T A A C A T T T A A A T C A G C G G C C G C A A T A A A A T A T C T T T A T T T T C A T T A C A T C T G T G
PacI (4241) SmaI (4250) NotI (4260)

4301 T G T T G G T T T T T T G T G T G A A T C G T A A C T A A C A T A C G C T C C A T C A A A C A A A A C G A A A C A A A A C A A A C T A G C A A A A T A G G C T G T C C C C A G T G C A A G T G C A
4401 G G T G C C A G A A C A T T T C T C T A T C G A A