



PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82) **EcoNI (96)**
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) **PvuII (239)** 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTCACGGCCCGCCGCTACCTGAGGCC
EcoNI (287)
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BglIII (589)**
501 TCTGTTCTGGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAACATGTGCACTGAGGGAGCGTTTCCGCACAGATCTGCGTG
1▶ M C T E G A F P H R S A C

BstXI (646)
601 TTCCTTACCCTACACATGTGCACACACATATCCATGTGTGTGCGCAGTCTTTGGGCTCTGTTCCACGGGCATGAAGTTACAGTGTGTTCCCTT
13▶ S L P L T H V H T H I H V C V P V L W G S V P R G M K L Q C V S L
701 TGGCTCCTGGGTACAATACTGATATTGTGCTCAGTAGACAACACGGTCTCAGGAGATGTCTGATTTCCACAGACATGCACCATATAGAAGAGATTTCC
47▶ W L L G T I L I L C S V D N H G L R R C L I S T D M H H I E E S F
801 AAGAAATCAAAGAGCCATCAAAGTAAAGACACCTTCCCAAATGTCACATCTCTGTCACATTGGAGACTCTGCAGATCATTAAAGCCCTTAGATGTGTG
80▶ Q E I K R A I Q A K D T F P N V T I L S T L E T L Q I I K P L D V C

XcmI (908)
901 CTGCGTGACCAAGAACCTCTGGCGTTCTACGTGGACAGGGTGTCAAGGATCATCAGGAGCCAAACCCAAAATCTTGAGAAAAATCAGCAGCATTGCC
113▶ C V T K N L L A F Y V D R V F K D H Q E P N P K I L R K I S S I A
1001 AACTCTTCTCTACATGCAGAAAACCTGCGGCAATGCAGGAACAGAGGCAGTGTCACTGCAGGCAGGAAGCCACCAATGCCACCAGAGTCATCCATG
147▶ N S F L Y M Q K T L R Q C Q E Q R Q C H C R Q E A T N A T R V I H

PvuII (1111) **XcmI (1133)** **AseI (1174)** **BspHI (1185)**
1101 ACAACTATGATCAGCTGGAGTCCACGCTGCTGCCATTAATCCCTGGGAGAGCTCGACGCTTTCTAGCCTGGATTAATAAGAAATCATGAAGTAATGTT
180▶ D N Y D Q L E V H A A A I K S L G E L D V F L A W I N K N H E V M F

MscI (1216)
1201 CTCAGCTTGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATT
213▶ S A •

HpaI (1348) **MfeI (1359)**
1301 TGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAGTTAAACAACAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGT

EcoRI (1444)
1401 GGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGA
1501 ATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTCTTTTCATGGAGTTAAGATAT

SspI (1683) **SwaI (1697)**
1601 AGTGTATTTTCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGTAAATATTCAGAAATAATT

EcoO109I (1758)
1701 TAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGG
1801 GAACAAAGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTT
141▶ • N R T Y K L P I L E E I T T K

BstXI (1987)
1901 TGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCTTGATGGA
125▶ V 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
2001 TCTGTCCACTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCAGCAGCACCCAAATGGCAATGGCTTCAGCA
92▶ R 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

StuI (2122)
2101 CAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCT
58▶ C 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

BspHI (2272) **BbsI (2268)** **XmnI (2264)**
2201 CATAGAGCATGGTATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGT
25▶ Y L M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (2330)
2301 ATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCATAAACGAGCTCTGCTTAT

SpeI (2485)
2401 ATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACA
2500 ACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTA

SnaBI (2613)

2600 ATAGCGATGACTAATACGTAGATGTAAGTCCATAAGGTGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGT

NdeI (2718)

2700 CAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTAT

SdaI (2896)

2800 TGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGCGGGGGTCTGTTGGCGGTGTCAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCC T

PacI (2904)

2900 **G C A G 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 C A A A A G G C C A G G A A C C G T A A A A A G G C C G C T T G C T G G C G T T T T T C C A T A G G C T C C G C C C C C T**

2998 **G A C G A G C A T C A C 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**

3098 **C T C C T G T T C C G A C 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 C T T C G G A A G C G T G G C G C T T T C T C A T A G C T C A C G C T G T A G G T A T C T C A G T T C**

3198 **G G T G T A G G T C G T T C G T C C A A G C T G G G C T G T G T G C A C G A A C C C C C G T T C A G C 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 C G**

3298 **G T A A G A 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 G A G G T A T G T A G G C G G T G C 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**

3398 **A C T A C G 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 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 A C**

3498 **C A C C G C T G G T A G C G G T G G T T T T T T G T T T G C A A G C A G C A G A T T A C G C G C 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 T C T G A C**

EagI (3664)

PacI (3644) SmaI (3653) NotI (3663)

3598 **G C T C A G 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 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**

3698 **T C T G T G 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 A T A C G C T C C A T C A A A A C A A A C G A A A C A 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**

3798 **A G T G C A G G T G C C A G A A C A T T T C T A T C G A A**