



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

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

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTAACTCTACGCTTTGTTTCGTTT

BstEII (555) **AgeI (552)** *NcoI (560)*
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCCCTACCTGAGATCACCGGTCCACCTGATTACATCTGCTGATGTGGGACTGCTCACGTT
1▶ M D S Y L L M W G L L T F

NcoI (674)
601 CATCATGGTGCCTGGCTGCCAGGAGAGCTCTGTGACGATGACCCGCCAGAGATCCCACAGCCACATCAAAGCCATGGCCTACAAGGAAGAAACCATG
13▶ I M V P G C Q A E L C D D D P P E I P H A T F K A M A Y K E G T M

BsrGI (760)
701 TTGAAGTGTGAATGCAAGAGAGGTTTCCGAGAAATAAAAAGGGGTCCTCTATATGCTGTACAGGAACTCTAGCCACTCGTCTGGGACAACCAAT
47▶ L N C E C K R G F R R I K S G S L Y M L C T G N S S H S S W D N Q
801 GTCAATGCACAAGCTCTGCCACTCGAAACACAAGCAAGTACACCTCAAGTGAAGAACAGAAAGAAAGAAACACAGAAATGCAAAGTCCAAT
80▶ C Q C T S S A T R N T T K Q V T P Q P E E Q K E R K T T E M Q S P M

PstI (933) *NcoI (949)*
901 GCAGCCAGTGGACCAAGCGAGCCTTCCAGTCACTGCAGGAACTCCACCATGGGAAAAATGAAGCCACAGAGAGAATTTATCATTTCTGTTGGGGCAG
113▶ Q P V D Q A S L P G H C R E P P P W E N E A T E R I Y H F V V G Q

EcoO109I (1044) BbsI (1080)
1001 ATGTTTTATTATCAGTGCCTCCAGGATACAGGGCTCTACACAGAGGCTCTGCTGAGAGCGTCTGCAAAATGACCCACGGGAAGACAAGTGGACCCAGC
147▶ M V Y Y Q C V Q G Y R A L H R G P A E S V C K M T H G K T R W T Q

NdeI (1107) **Bsu36I (1156)**
1101 CCCAGTCCATATGCACAGGTGAAATGGAGACCAGTCAAGTTCCAGGTGAAGAGAAGCCTCAGGCAAGCCCGAAGGCCGCTCTGAGAGTGAGACTTCTGT
180▶ P Q L I C T G E M E T S Q F P G E E K P Q A S P E G R P E S E T S C

NcoI (1247) **NgoMIV (1291)**
1201 CCTCGTCAACAACAGATTTTCAAATACAGACAGAAATGGCTGCAACCATGGAGAGCTCCATATTTACAACAGAGTACCAGGTAGCAGTGGCCGGCTGT
213▶ L V T T T D F Q I Q T E M A A T M E T S I F T T E Y Q V A V A G C

XbaI (1376)
1301 GTTTTCTGCTGATCAGCGTCTCTCCTGAGTGGGCTCACCTGGCAGCGGAGACAGAGGAAGAGTAGAAGAACAATCTAGAAAACAAAAGAACAAGAA
247▶ V F L L I S V L L L S G L T W Q R R Q R K S R R T I •

MscI (1406)
NheI (1400)
1401 GCTAGCTGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTA

HpaI (1538) MfeI (1549)
1501 TTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACCTGCAATCATTATTTATGTTTCAGGTTCCAGGGGAGGTGGGAGGTTTT

EcoRI (1634)
1601 TTAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAACTCTTTCT
1701 GAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTATGAGTAAAGATATAGTGTATTTT

SapI (1816) **SspI (1873)** **SwaI (1887)**
1801 CCAAGGTTTGAAGTCTCTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTGAGAATAATTTAAATACATC

EcoO109I (1948)
1901 ATTGCAATGAAAATAAATGTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAAGGA
2001 ACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTT
141▶ • N R T Y K L P I L E E I T T K V L K

BstXI (2177)
2101 GCCATTCATCTCAATGAGCACAAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCCCTGATGGATCTGTCCACC
122▶ 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 R I S R D V
2201 TCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCCAGCACAGACAGTGA
88▶ 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 T V

StuI (2312)
2301 CCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGTCCTCATAGAGCAT
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

BbsI (2458) **XmnI (2454)**
2401 GGTGATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCTCATGGTGGCCCTCTATAGTGCAGTCTATTACTAT
22▶ T I K E T A V E V L E L D Q Q S I N F T K M

2501 **AseI (2520)**
 GCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCC

2601 **SpeI (2675)**
 CACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCATTGA

2701
 CGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGAC

2801 **SnaBI (2803)**
 TAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGC

2901 **NdeI (2908)**
 GTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTA

3001 **PacI (3094)**
PstI (3087)
SdaI (3086)
 TGGGAACATACGTCATTATTGACGTCAATGGGGCGGGTCTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAAAT

3101 **BspLU11I (3104)**
 AAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA

3201
 AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGAC

3301
 CCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTT

3401 **ApaLI (3418)**
 CGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACAGACT

3501
 TATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACAC

3601
 TAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCGCTGGTAGC

3701
 GGTGGTTTTTTTGGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACG

3801 **EagI (3854)**
PacI (3834) **Swal (3843)** **NotI (3853)**
 AAAACTCACGTAAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGT

3901
 TTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCA

4001
 GAACATTTCTCTATCGAA