



PvuI (7)
SgfI (6)
EcoNI (96)

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
PvuII (239)
Bsu36I (291)
EcoNI (287)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCCTTACACGGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
KasI (535)
AgeI (552)

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACTCTGAGATCACCGGTACCATGGCGTCTCCAGTGGGAAGGGATCTTGGACGCCCGA
1▶ M A S P S G K G S W T P E

NheI (624)
SacII (616)

601 GGCTCCTGGTTTTGGCCGCGGGCTAGCACGGGACCTGGTGGACTCGGTGGACGACGCCGAGGGCCTTTACGTGGCTGTTGAGCGGTGCCTCTGTGC
 13▶ A P G F G P R A L A R D L V D S V D D A E G L Y V A V E R C P L C

NgoMIV (710)
NaeI (710)
SgrAI (709)
EagI (765)

701 AACACCACCTGCGCGGTTGACTTGCGCCAAGTGCCTCAGAGCGGTGATTTCTGCTATTTCGACGGCCGCGAGAGGTTTATTGACAAGAAGG
 47▶ N T T R R R L T C A K C V Q S G D F V Y F D G R D R E R F I D K K

XmnI (829)
ScaI (846)

801 AAAGACTAAGCCTTAAAGAACAAGCAAGAAGATTTTCAGAAAGAAGTACTAAAAGCTATGGAAGGAAAAGCGGCTTACAGATCAGTTGAGATGGAAAAT
 80▶ E R L S Q L K N K Q E E F Q K E V L K A M E G K R L T D Q L R W K I

PvuII (925)

901 AATGTCATGCAAGATGAGGATTGAACAGCTGAAGCAACAATATGTAAGGAAATGAGGAAATGAAGAAAAATTTCTGAAGGTCTCCTCAAGAACAAGGAA
 113▶ M S C K M R I E Q L K Q T I C K G N E E M K K N S E G L L K N K E
 1001 AAGAACCAGAAGCTTTACAGCCGAGCAGCGGACCAAGAGAAAAAGGAGAAGATTACGCGGCACAAACCGCAAGCTTGGGGACCTGGTGGAGAAGAAGA
 147▶ K N Q K L Y S R A Q R H Q E K K E K I Q R H N R K L G D L V E K K

BstBI (1139)

1101 CCATTGACTTGAAGAGTCACTATGAGCGGTTGGCGCGGCTTCAAGGTACACATCCTAGAGCTCACCTCCATCATATTTCCCAATCGACGAAGTGAAGAC
 180▶ T I D L K S H Y E R L A R L R R S H I L E L T S I I F P I D E V K T

PstI (1214)

1201 TTCTGGGAGAGACCTGCAGACGTGCTTCAGAGACTGACAGTCCATGACCTCAAGCATGGTGGAGCAAGCTTCTGAGGCCCGGAGGACAACCTACCTC
 213▶ S G R D P A D V S S E T D S A M T S S M V S K L A E A R R T T Y L
 1301 TCTGGAAGATGGGTCTGTGATGACCACAATGGTACACCAGCATTAGCATCACAGGCCGTGGATTAGCTACAAACACGGGGACTACTCTGCTTACT
 247▶ S G R W V C D D H N G D T S I S I T G C P W I S L P N N G D Y S A Y
 1401 ACAATTGGGTAGAAGAGAAAACAACCAAGGACCTGACATGGAGCATAACAACGGCCCTACACTATCAGCGCGCTGGGCTACGCCACGCAGCT
 280▶ Y N W V E E K K T T Q G P D M E H N N P A Y T I S A A L G Y A T Q L
 1501 CGTCAACATTGTCTCACATACTTACATCAATCTTCCAAAAAGCTGTGCAACAGCGAGTTCTGTGGCGAAAACTCAGCAAGCAGAAACTGACACGC
 313▶ V N I V S H I L D I N L P K K L C N S E F C G E N L S K Q K L T R
 1601 GCAGTGGGAAACTGAACGCAAAACATCCTTTACCTTTGTTCTTCTCAGCATGTAATCTGGATCAGTTGCAAGCCACTGCACACACTCAGGAACCTGATGC
 347▶ A V R K L N A N I L Y L C S S Q H V N L D Q L Q P L H T L R N L M

AvrII (1725)
XhoI (1762)
NotI (1772)

1701 ACTTGGTCAGCCCGCTCTGAGCACCTAGGCAGGTGACGACCCCTTTGAAGTTCGAGCAGACCTCGAGGAGTCCATGGAATTTGTGGACCCTGGAGTTGC
 380▶ H L V S P R S E H L G R S G P F E V R A D L E E S M E F V D P G V A
 1801 TGGAGAATCAGACCGGAGTGGAGATGAGCGTGAAGCGATGAGGAGACTGACCTGGGCACAGACTGGGAGAACCTGCCAAGCCCGGATCTGTGACATC
 413▶ G E S D A S G D E R V S D E E T D L G T D W E N L P S P R F C D I

Eco47III (1966)

1901 CCTTCCCAGCCGGTGAAGTGTCCAGAGCCAGAGCACCCAGGTGTCCCCACCCATTGCCAGCAGCAGCGCTGGTGGGATGATCTCCTCCGCTGCGGCCT
 447▶ P S Q P V E V S Q S Q S T Q V S P P I A S S S A G G M I S S A A A

BstEII (2001)
XbaI (2049)
MscI (2060)

2001 CGGTGACCTTTGGTTCAAAGCTTACACTGGACACCGTAACGAGTTGGTCTAGACTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAA
 480▶ S V T S W F K A Y T G H R •

HpaI (2192)

2101 CCACAAC TAGAATGCAGTGA AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACA

EcoRI (2288)

2201 CAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATCTAAAT

2301 ACAGCATAGCAAACTTTAACTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCA

2401 TTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCAC

2501 **SspI (2527)** **SwaI (2541)**
 TGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCT

2601 CAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTA
 141 •

2701 **BstXI (2831)**
 GTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCACTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAG
 140 N R T 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

2801 **StuI (2966)**
 ATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTT
 106 I L E 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

2901 **XmnI (3108)** **BspHI (3116)** **AseI (3174)**
 TCTGCCCGTTGCTCACAGCAGCCCAATGGCAATGGCTTACGACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCC
 73 Q G N 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

3001 **BspHI (3116)**
 AGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTCTGCTGA
 40 T K T 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

3101 **XmnI (3108)** **BspHI (3116)** **AseI (3174)**
 GAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCTGGATGG
 6 S I N F T K M

3201 CGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTCGCTCAATGGGGCGGAGTTGT

3301 **SpeI (3329)**
 TACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCT

3400 **SnaBI (3457)**
 ATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCAT

3500 **NdeI (3562)**
 GTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTT

3600 TACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGGGGGGTCTGGG

3700 **PstI (3741)** **SdaI (3740)** **PacI (3748)** **BspLU11I (3758)**
 GCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTA

3798 AAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACT

3898 ATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGA

3998 **ApaLI (4072)**
 AGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCG

4098 ACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGC

4198 GAGGTATGTAGGCGGTGCTACAGAGTTCTGAAGTGGTGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTT

4298 ACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAA

4398 **PacI (4488)**
 AAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCAATGGCTAGTTAATTAAC

4498 **EagI (4508)** **NotI (4507)** **SwaI (4497)**
 ATTTAAATC AGCGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACA

4598 AAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA