



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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTCACGGCCCGCCGCCCTACCTGAGGCC EcoNI (287)

301 GCCATCCACGCGGTTGAGTCGCGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441) 401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** SphI (560) AseI (574)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTGAGCATGCAGAAATGTGATTAATACTGTGAAGGAAAAGGCACT 1► M Q N V I N T V K G K A L

PshAI (618) PvuII (683)
601 GGAAGTGGCTGAGTACCTGACCCCGTCTCAAGGAATCAAAGTTAAGGAAACAGGTGTAATTACCCAGAAGATTTGTGGCAGCTGGAGATCACCTA 13► E V A E Y L T P V L K E S K F K E T G V I T P E E F V A A G D H L

XcmI (712) **BstEII (783)**
701 GTCCACCACTGTCCAACATGGCAATGGGCTACAGGGGAAGAATTGAAAGTGAAGGCATACCTACCAACAGGCAACAATTTTGGTAAACAAAATATGTGC 47► V H H C P T W Q W A T G E E L K V K A Y L P T G K Q F L V T K N V

BsaBI (886)
801 CGTGCTATAAGCGGTGCAAAACAGATGGAATATTGAGTGAATTGGAAGCTATCATTGAAGAAGATGATGGTGTGGCGGATGGGTAGATACATATCACAA 80► P C Y K R C K Q M E Y S D E L E A I I E E D D G D G G W V D T Y H N

DraIII (983)
901 CACAGGTATTACAGGAATAACGGGAGCCGTTAAAGAGATCACACTGGAAAATAAGGACAATATAAGGCTTCAAGATTGCTCAGCACTATGTGAAGAGGAA 113► T G I T G I T E A V K E I T L E N K D N I R L Q D C S A L C E E E

PstI (1022)
1001 GAAGATGAAGATGAAGGAGAAGTGCAGATATGGAAGAATATGAAGAGAGTGGATTGTTGGAACAGATGAGGCTACCTAGATACAAGGAAAATAGTAG 147► E D E D E G E A A D M E E Y E E S G L L E T D E A T L D T R K I V

HindIII (1100) **BstXI (1198)**
1101 AAGCTTGTAAAGCAAAACCTGATGCTGGCGGTGAAGATGCTATTTTGC AAACCAGAACTTATGACCTTACATCACTTATGATAAATATTACCAGACTCC 180► E A C K A K T D A G G E D A I L Q T R T Y D L Y I T Y D K Y Y Q T P

PshAI (1264)
BbsI (1261)
BspLU11I (1253)
1201 ACGATTATGGTTGTTTGGCTATGATGAGCAACGGCAGCCTTTAACAGTTGAGCACATGTATGAAGACATCAGTCAGGATCATGTGAAGAAAACAGTGACC 213► R L W L F G Y D E Q R Q P L T V E H M Y E D I S Q D H V K K T V T

SphI (1356)
1301 ATTGAAAATCACCTCATCTGCCACCACCTCCCATGTGTTGAGTTCACCCATGCAGGCATGCTGAGGTGATGAAGAAAATCATTGAGACTGTTGCAGAAG 247► I E N H P H L P P P P M C S V H P C R H A E V M K K I I E T V A E

NdeI (1420) **BsrGI (1449)**
1401 GAGGGGAGAACTGGAGTTCATATGTATCTTTCTTATTTTCTGAAATTTGTACAAGCTGTCAATCACAATAAGAATATGACTACACAAGACTTCCAC 280► G G G E L G V H M Y L L I F L K F V Q A V I P T I E Y D Y T R H F T

MscI (1531)
NheI (1525)
1501 AATGTAATGAAGAGACATAAAATCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGC 313► M •

HpaI (1663) MfeI (1674)
1601 TTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTCATTCTTTATGTTTCAGG

EcoRI (1759)
1701 TTCAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAATACAGCATAGCAAACTTTAACCTCAAAT

1801 CAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCA

1901 TGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTCTTCACTTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATGAAAA

SwaI (2012) **EcoO109I (2073)**
2001 TATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTA

2101 GTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGAGGGGATGAGTT 141► • N R T Y K L P I L E

SacI (2273)
2201 CCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCT 130► E I T T K 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

BstXI (2302)
2301 GACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATG 97► V V R I S 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

StuI (2437)

2401 GCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCCTGATGGCCGCCCGACAT
63 A I A E A 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

BspHI (2587)
BbsI (2583)
XmnI (2579)

2501 GGTGCTTGTGTCCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCT
30 H K N D E 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 (2645)

2601 CCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTCTCACTA

SacI (2702)

2700 AACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTGCGTCAATGGGCGGAGTTGTTACGACATTTGGAAAGTCCCCTTGATT

SpeI (2800)

2800 TACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGACTGCCAAAA

SnaBI (2928)

2899 CCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCAT

NdeI (3033)

2999 TTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTC

3099 AATGGAAAGTCCCTATTGGCGTTACTATGGAAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGTTGGCGGTCAGCCAGGCGGGCCATTACCGT

PstI (3212)
SdaI (3211) **PacI (3219)** **BspLU11I (3229)**

3199 AAGTTATGTAACGCCTG 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 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

3297 TAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGA

3397 AGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCAGCT

ApaLI (3543)

3497 GTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGCTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCG

3597 TCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTC

3697 TTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTT

3797 GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTT

EagI (3979)
PacI (3959) **Swal (3968)** **NotI (3978)**

3897 TTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCCAATAAAATA

3996 TCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAT

4096 AGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA