



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGTACTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACCGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCATGGGTCCGGGGCTGCTCAGGGGCTGTGGCCGCTGCA

1▶ M G R G L L R G L W P L H

MluI (613)
601 CATCGTCTGTGGACGCGTATCGCCAGCAGATCCCACCGCAGTTTCAAGTGGGatgtggaatggaggcccagaagaatgaaatcatctgccccagc

13▶ I V L W T R I A S T I P P H V Q K S D V E M E A Q K D E I I C P S

AseI (730)
701 tgtaataggactgccccatccactgagacataTTAATAACGACATGATAGTCACTGACAACAACGGTGCAGTCAAGTTTCCACAACCTGTGTAATTTTGTG

47▶ C N R T A H P L R H I N N D M I V T D N N G A V K F P Q L C K F C

PstI (846)
801 ATGTGAGATTTTCCACCTGTGACAACAGAAATCCTGCATGAGCAACTGCAGCATCACCTCCATCTGTGAGAAGCCACAGGAAGTCTGTGTGGCTGTATG

80▶ D V R F S T C D N Q K S C M S N C S I T S I C E K P Q E V C V A V W

901 GAGAAAGAATGACGAGAACAATAACTAGAGACAGTTTGCATGACCCCAAGCTCCCTACCATGACTTTATTCTGGAAGATGCTGCTTCTCCAAAGTGC

113▶ R K N D E N I T L E T V C H D P K L P Y H D F I L E D A A S P K C

1001 ATTATGAAGGAAAAAAGCCTGGTGAGACTTTCTCATGTGTTCTGTAGCTCTGATGAGTGCATGACAACATCATCTTCTCAGAAGAATAAACA

147▶ I M K E K K K P G E T F F M C S C S S D E C N D N I I F S E E Y N

1101 CCAGCAATCCTGACTTGTGCTAGTCATATTTCAAGTACAGGCATCAGCCTCCTGCCACCACTGGGAGTTGCCATATCTGTATCATCATCTTCTACTG

180▶ T S N P D L L L V I F Q V T G I S L L P P L G V A I S V I I I F Y C

HpaI (1207)
1201 CTACCGCTTAACCGGCAGCAGAAGCTGAGTTCAACCTGGGAAACCGCAAGACGCGGAAGCTCATGGAGTTCAGCGAGCACTGTGCCATCATCCTGGAA

213▶ Y R V N R Q Q K L S S T W E T G K T R K L M E F S E H C A I I L E

BsrBI (1305) **BbrPI (1323)**
1301 GATGACCGCTTGACATCAGCTCCACGTGTGCAACAACATCAACCACAACACAGAGCTGCTGCCATTGAGCTGGACACCCTGGTGGGAAAGTGCCT

247▶ D D R S D I S S T C A N N I N H N T E L L P I E L D T L V G K G R

BglII (1466)
1401 TTGCTGAGTCTATAAGCCAAGCTGAAGCAGAACACTTCAGAGCAGTTTGAAGACAGTGGCAGTCAAGATCTTTCCCTATGAGGAGTATGCCTCTTGAA

280▶ F A E V Y K A K L K Q N T S E Q F E T V A V K I F P Y E E Y A S W K

BsrBI (1570)
1501 GACAGAGAAGGACATCTTCTCAGACATCAATCTGAAGCATGAGAACAATACTCCAGTTCCTGACGGCTGAGGAGCGGAAGACGGAGTTGGGAAACAATAC

313▶ T E K D I F S D I N L K H E N I L Q F L T A E E R K T E L G K Q Y

FspI (1676)
1601 TGGCTGATCACCGCTTCCACGCAAGGGCAACCTACAGGAGTACCTGACCGGCATGTCATCAGCTGGGAGGACCTGCGCAAGCTGGGAGCTCCCTCG

347▶ W L I T A F H A K G N L Q E Y L T R H V I S W E D L R K L G S S L

XmaI (1700) **BsaBI (1752)** **ApaLI (1762)**
1701 CCCGGGGATTGCTCACCTCCACAGTATCACACTCCATGTGGGAGGCCCAAGATGCCATCGTGCACAGGGACCTCAAGAGCTCCAATATCCTCGTGAA

380▶ A R G I A H L H S D H T P C G R P K M P I V H R D L K S S N I L V K

1801 GAACGACCTAACCTGCTGCTGTGTGACTTTGGGCTTTCCCTGCGTCTGGACCTACTCTGTCTGTGGATGACCTGGCTAACAGTGGGAGGTTGGAACT

413▶ N D L T C C L C D F G L S L R L D P T L S V D D L A N S G Q V G T

XcmI (1931) **PshAI (1968)** **NcoI (1982)**
1901 GCAAGATACATGGCTCCAGAAGTCTAGAAATCCAGGATGAATTTGGAGAATGTTGAGTCTTCAAGCAGACCGATGTCTACTCCATGGCTCTGGTGTCT

447▶ A R Y M A P E V L E S R M N L E N V E S F K Q T D V Y S M A L V L

2001 GGGAAATGACATCTCGTGAATGCAGTGGGAGAAGTAAAAGATTATGAGCCTCCATTTGGTTCCAAGGTGGGGAGCACCCCTGTGTGAAAGCATGAA

480▶ W E M T S R C N A V G E V K D Y E P P F G S K V R E H P C V E S M K

2101 GGACAACGTGTTGAGAGATCGAGGGCGACCAGAAATCCAGCTTCTGGCTCAACCACCAGGGCATCCAGATGGTGTGTGAGACGTTGACTGAGTGTGG

513▶ D N V L R D R G R P E I P S F W L N H Q G I Q M V C E T L T E C W

2201 GACCACGACCCAGAGGCCGCTCACAGCCAGTGTGTGGCAGAACGCTTCAAGTGGAGCATCTGGACAGGCTCTCGGGGAGGAGCTGCTCGGAGG

547▶ D H D P E A R L T A Q C V A E R F S E L E H L D R L S G R S C S E

SapI (2340) **NheI (2360)** **MscI (2366)**
2301 AGAAGATTCCTGAAGACGGCTCCCTAAACACTACCAAAATAGCTCTTCTGGGGCAGGCTGGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTG

580▶ E K I P E D G S L N T T K •

2401 GACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGT

HpaI (2498)

MfeI (2509) EcoRI (2594)
 2501 TAACAACAACAATTGCATTCAATTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTC
 2601 TAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAA
 SspI (2776)
 2701 TGTGATTAGCTGTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAA
 SspI (2833) SwaI (2847)
 2801 ATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCA
 2901 GATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTA
 3001 GCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCAATGAGCACAAGCAGTCAGGAGCATAG
 141 • 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
 3101 TCAGAGATGAGCTCTCTGCACATGCCACAGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAA
 108 D S 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
 StuI (3272)
 3201 AGTCTTCTGCCGTTGCTCACAGCAGACCCAAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGAT
 75 D K 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
 3301 CCCCCAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCAGCTCCACCAGCTCCAGATCC
 42 E G 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
 XmnI (3414) AseI (3480)
 3401 TGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCGGATATACTATGCCGATGATTAATTGTCAAACAGCGT
 8 Q Q S I N F T K M
 3501 GGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTCGCTCAATGGGGCGG
 SpeI (3635)
 3601 AGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAACTCCATTGACGTCAATGGGGTGAGACTTGAAATCCCGTGAGTCAA
 SnaBI (3763)
 3701 CCGCTATCCACGCCATTGATGACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAG
 NdeI (3868)
 3801 GTCATGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGACTGCCAAGTGGG
 3901 CAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTATTATTGACGTCAATGGGCGGGGGTCT
 PacI (4054)
 PstI (4047) SdaI (4046) BspLUIII (4064)
 4001 GTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACC
 4101 GTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGG
 4201 ACTATAAAGATACCAGCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCG
 ApaLI (4378)
 4301 GGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGTCTGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTACG
 4401 CCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAG
 4501 AGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCA
 4601 GTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGGCAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAA
 PacI (4794)
 4701 AAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATT
 EagI (4814)
 SwaI (4803) NotI (4813)
 4801 AACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAA
 4901 ACAAACGAAACAAAACAAACTAGCAAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA