



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTATGTCGTGACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **BspEI (693)**
201 GTGAACGTTCTTTTTTCGAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACCGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGGTTCGCGCCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **BspLU11I (560)**
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAACATGTCTCATGCGGCCGAACCAGCTCGGGATGGCGTAGA
1 M S H A A E P A R D G V E

XhoI (617) **BspEI (693)**
601 GGCCAGCGCGGAGGCCCTCGAGCCGTGTTCTGTGCTGTTGGAGGAGCGCAGGCCGGCCGACTCGGCTCAGCTGCTCAGCCTGAACTCTTGTCCGGAA
13▶ A S A E G P R A V F V L L E E R R P A D S A Q L L S L N S L L P E
701 TCCGGATTGTTGCTGACATAGAATTAGAAAACGCTCTTGATCCTGACAGTCTACGAGCTCAAAGCCAACCTTACCCTTTCGCTCAAGCCTCCCAA
47▶ S G I V A D I E L E N V L D P D S F Y E L K S Q P L P L R S S L P

BbsI (846)
801 TATCACTGCAGGCCACACCAGCCAGCTACACTCTGTCATGCTTCTGCAGGGGCTCCAGGACCCCTGCCATGTCGTCTCTTCTTTCATCGAG
80▶ I S L Q A T P A T P A T L S A S S S A G G S R T P A M S S S S S S R

BstAPI (915) **SacII (974)**
901 GGTCTTGCTGCGGCGAGCTAATGCGGGCCAGGCGCAGGAGAGGCGTGAGCGTCGGGAACAGGCCGCGCGGCTCCCTTCCCCAGTCTGCA
113▶ V L L R Q Q L M R A Q A Q E Q E R R E R R E Q A A A A P F P S P A
1001 CCTGCCTCTCCTGCCATCTCTGTGGTTGGCGTCTCTGCTGGGGCCACACATTGAGCCGTCCACCCCTGCTCAGGTGCCAGGGAGGTGCTCAAGGTGC
147▶ P A S P A I S V V G V S A G G H T L S R P P P A Q V P R E V L K V

BssHII (1141)
AscI (1140)
1101 AGACCCATCTGGAGAACCAACGCGCTACCACCTGCAGCAGGCGCGGCGCAGGTAACAGTACCTGTCCACCACACTCGGGCCCAAGCTGGCTTC
180▶ Q T H L E N P T R Y H L Q Q A R R Q Q V K Q Y L S T T L G P K L A S

Bsu36I (1252) **XcmI (1292)**
1201 CCAGGCCCTACCCACCGCGGGGCCCAAGTGCCAGCCACTGCCTGCCCTGAGGCTGCCACACTACCGGCCACAGGCAGTGCGCCAACAGC
213▶ Q A L T P P P G P A S A Q P L P A P E A A H T T G P T G S A P N S

NotI (1301)
1301 CCCATGGCGCTGCTCACCATCGGGTCCAGCTCAGAGAAGGAGATTGATGATGTCATTGATGAGATCATCAGCCTGGAGTCCAGTTACAATGATGAAATGC
247▶ P M A L L T I G S S S E K E I D D V I D E I I S L E S S Y N D E M

BsrGI (1475)
1401 TCAGTATCTGCCGGAGGCACCACAGGACTGCAGTCCCCAGCAGCTGCCTGTGTGAGGAATCTGCTTGTGTACAGTAGTCAAGGCGTGGCCAC
280▶ L S Y L P G G T T G L Q L P S T L P V S G N L L D V Y S S Q G V A T

BstAPI (1517) **BglII (1556)**
1501 ACCAGCCATCACTGTCAAGCACTCCTGCCAGCTGAGCTGCCAACATCAAACGGGAGATCTCTGAGACCAGGCAAAGGCCCTTTTGAAGGAACGGCAG
313▶ P A I T V S N S C P A E L P N I K R E I S E T E A K A L L K E R Q
1601 AAGAAAGACAATCACAACCTAATTGAGCGTCGAGGCGATTCAACATTAACGACAGGATCAAGGAAGTGGGCACTCTCATCCCTAAGTCCAGTGACCCGG
347▶ K K D N H N L I E R R R R F N I N D R I K E L G T L I P K S S D P

StuI (1730) **Eco47III (1772)**
1701 AGATGCGCTGGAACAAGGGCACCATCCTGAAGGCTCTGTGGATTATCCGCAAGCTGCAGAAGGAGCAGCAGCGCTCAAAGACCTGGAGAGCCGGCA
380▶ E M R W N K G T I L K A S V D Y I R K L Q K E Q Q R S K D L E S R Q

EcoRI (1838) **NcoI (1869)**
1801 GCGATCCCTGGAGCAGGCCAACCGCAGCCTGCAGTCCGAATTCAGGAACTAGAAGTGCAGGCCAGATCCATGGCCTGCCAGTCCCTCCACTCCAGGG
413▶ R S L E Q A N R S L Q L R I Q E L E L Q A Q I H G L P V P P T P G

Psp1406I (1986)
1901 CTGCTTTCCTTGGCCACGACTTCGGCTTCTGACAGCCTCAAGCCAGAGCAGCTGGACATTGAGGAGGAGGGCAGGCCAGGCCAGCAACGTTCCATGTAG
447▶ L L S L A T T S A S D S L K P E Q L D I E E E G R P G A A T F H V

XcmI (2078)
2001 GGGGGGACCTGCCAGAATGCTCCCCATCAGCAGCCCTGCACCGCCTCAGATGCCCTTCTGGACCTGCCTTCCAGCGACCACTGGGGACCT
480▶ G G G P A Q N A P H Q Q P P A P P S D A L L D L H F P S D H L G D L
2101 GGGAGACCCCTTCCACTGGGGTGGAGGACATTCTGATGGAGGAGGAGGGGGTGGTGGGAGGACTGTCGGGGGTGCCCTGCCCCACTGCGGGCT
513▶ G D P F H L G L E D I L M E E E E G V V G G L S G G A L S P L R A

NheI (2293)
2201 GCCTCCGATCCCCTGCTCTCTCAGTGTCCCCTGCTGTCTCCAAGCCAGCAGCCGCCGAGCAGCTTTCAGCATGGAAGAGGAGTCTGATCAGTAGCT
547▶ A S D P L L S S V S P A V S K A S S R R S S F S M E E E S •

2301 GGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGAATGCAGTGAAGAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTT

HpaI (2431) **MfeI (2442)**
2401 ATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACAAATGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGTTTTTAAAGC

2501 **EcoRI (2527)**
 AAGTAAAACCTCTACAAATGTGGTATGGAAATCTAAAATACAGCATAGCAAACCTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGAT
 2601 GAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAGTGATTTTTCCAAGG

2701 **SapI (2709)** **SspI (2766)** **SwaI (2780)**
 TTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAA
 2801 TGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTA
 2901 ATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTC
 3001 ATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAG
 119 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 R D V E D S
 3101 AGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCC
 86 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 R G
 3201 **StuI (3205)**
 AATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGTCTCATAGAGCATGGTGATC
 53 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 T I
 3301 **BbsI (3351)** **XmnI (3347)**
 TTCTCAGTGGCGACTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATA
 19 K E T A V E V L E L D Q Q S I N F T K M

3401 **AseI (3413)**
 TACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACTCCACCCTA
 3501 **SpeI (3568)**
 CACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAAT
 3601 **SnaBI (3696)**
 GGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACG
 3701 TAGATGTAAGTCCAAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGCATAATGCCAGGCGGGCCATTTACCGTATTGACGTCAATAGGGGGCGTACTTG
 3801 **NdeI (3801)**
 GCATATGATACACTTGTACTGCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAAC
 3901 **PacI (3987)** **SdaI (3979)** **BspLU11I (3997)**
 ATACGTCAATTATTGACGTCAATGGGCGGGGCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACA
 4001 TGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCG
 4101 ACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCG
 4201 CTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTGCTCCA
 4301 **ApaLI (4311)**
 AGCTGGGCTGTGTGCACGAACCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACAGACTTATCGCC
 4401 ACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGA
 4501 ACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTCCGGCAAACAAACCCGCTGGTAGCGGTGTT
 4601 TTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTTACGGGCTGACGCTCAGTGAACGAAAATC
 4701 **PacI (4727)** **SwaI (4736)** **NotI (4746)**
 ACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTGT
 4801 GTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATT
 4901 TCTCTATCGAA