



125

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

**Psp1406I (203)** **HindIII (245)** **Bsu36I (291)**  
**EcoNI (287)** 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMI (441)** **NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

**KasI (535)** **AgeI (552)** **BspLU11I (560)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTCAACATGTGGGATTCGACGATCCTGGCATTCTACAGCGA  
601 CAGCTTCGGGGGCGACGCCAGGCCGACGAGGGGCGAGCCGCAAATCGCAGCTGCAGAGGGCGCTTCAAGGAGTTCCTGGCGCAGTACCGAGTGGGCACC  
13> S F G G D A Q A D E G Q A R K S Q L Q R R F K E F L R Q Y R V G T  
1> M S G F D D P G I F Y S D

**ScaI (761)**  
701 GACCGCACGGGCTTACCTTCAAATACAGGGATGAAGTCAAGCGGCATTACAACCTGGGGGAGTACTGGATTGAGGTGGAGATGGAGGATCTGGCCAGCT  
47> D R T G F T F K Y R D E L K R H Y N L G E Y W I E V E M E D L A S

**BsrGI (824)** **BstEII (888)**  
801 TTGATGAGGACCTGGCCGACTACTTGTACAAGCAGCCAGCCGAGCACCTGCAGCTGCTGGAGGAAGCTGCCAAGGAGGTAGCTGATGAGGTGACCCGGCC  
80> F D E D L A D Y L Y K Q P A E H L Q L L E E A A K E V A D E V T R P  
901 CCGGCTTCTGGGAGGAGGTGCTCCAGGACATCCAGGTCATGCTCAAGTCCGACGCCAGCCCTTCCAGCATTCTAGCTGAAGTCCGACATGATGTCA  
113> R P S G E E V L Q D I Q V M L K S D A S P S S I R S L K S D M M S

**SexAI (1001)**  
**DraIII (1000)** **RsrII (1040)**  
1001 CACCTGGTGAAGATCCCTGGCATCATCATCGCGCCTCTGCGTCCGTGCCAAGGCCACCCGCATCTCTATCCAGTGCCCGCAGCTGCCGCAACACCCCTCA  
147> H L V K I P G I I I A A S A V R A K A T R I S I Q C R S C R N T L

**XcmI (1175)**  
1101 CCAACATTGCCATGCGCCCTGGCCTCGAGGGCTATGCCCTGCCAGGAAGTGCAACACAGATCAGGCTGGGCGCCCAATGCCATTGGACCCGTA  
180> T N I A M R P G L E G Y A L P R K C N T D Q A G R P K C P L D P Y F  
1201 CATCATGCCGACAAATGCAATGCGTGGACTTCCAGACTGAAGCTGCAGGAGTCCGCTGATGCAGTCCCCCAGGGAGATGCCAGACACATGCAG  
213> I M P D K C K C V D F Q T L K L Q E L P D A V P H G E M P R H M Q

**Acc65I (1313)** **Tth111I (1324)** **BstEII (1347)**  
1301 CTCTACTGCGACAGGTACCTGTGTGACAAGGTCGTCCTGGGAACAGGGTTACCATCATGGGCATCTACTCCATCAAGAAGTTTGGCCTGACTACAGCA  
247> L Y C D R Y L C D K V V P G N R V T I M G I Y S I K K F G L T T S  
1401 GGGGCCGTGACAGGGTGGCGTGGGCATCCGAAGCTCCTACATCCGCTGCTGGCGTCCAGGTGGACACAGATGGCTCTGGCCGAGCTTTGCTGGGGC  
280> R G R D R V G V G I R S S Y I R V L G I Q V D T D G S G R S F A G A  
1501 CGTGAGCCCCAGGAGGAGGAGGATTCGTCGCTGGCTGCCCTCCCAATGTCTATGAGGTGATCTCCAAGAGCATGCCCCCTCCATCTTTGGGGC  
313> V S P Q E E E E F R R L A A L P N V Y E V I S K S I A P S I F G G  
1601 ACAGACATGAAGAAGGCCATTGCCTGCCTGCTCTTTGGGGCTCCCGAAGAGGCTCCTGATGGACTTACTCGCCGAGGAGACATCAACCTGCTGATGC  
347> T D M K K A I A C L L F G G S R K R L P D G L T R R G D I N L L M

**SandI (1703)** **Bst1107I (1765)**  
1701 TAGGGGACCTGGGACAGCCAAGTCCCAGCTTCTGAAGTTTGTGGAGAAGTGTCTCCCATTTGGGGTATACAGTCTGGGAAAGGCAGCAGCGCAGCTGG  
380> L G D P G T A K S Q L L K F V E K C S P I G V Y T S G K G S S A A G

**SandI (1820)** **NcoI (1859)** **BstXI (1859)**  
1801 ACTGACAGCCTCGGTGATGAGGGACCTTCGTCGCCGAATTTTCATCATGGAGGGCGGAGCCATGGTCTGGCCGATGGTGGGGTGTCTGTATTGACGAG  
413> L T A S V M R D P S S R N F I M E G G A M V L A D G G V V C I D E

**NcoI (1943)**  
1901 TTTGACAAGATGCGAGAAGATGACCGTGTGGCAATCCACGAAGCCATGGAGCAGCAGACCATCTCTATCGCCAAGGCTGGGATCACCACCACCTGA  
447> F D K M R E D D R V A I H E A M E Q Q T I S I A K A G I T T T L N

**EagI (2037)**  
2001 CCCGCTGCTCCGCTCGGCTGCTGCCAAGTCAAGTGTTCGGCCGCTGGGATGAGACGAAGGGGAGGACAACATTGACTTCTATGCCACCATCTTGTGCGG  
480> S R C S V L A A A N S V F G R W D E T K G E D N I D F M P T I L S R

**BsiBI (2109)** **Eco72I (2179)** **BbrPI (2179)**  
2101 CTTGACATGATCTTTCATCGTCAAGGATGAGCACAATGAGGAGAGGGATGtGATGCTGGCCAAGCATGTCTACTCTGACGTGAGCGCACTGACACAG  
513> F D M I F I V K D E H N E E R D V M L A K H V I T L H V S A L T Q  
2201 ACACAGGCTGTGGAGGGCAGATTGACCTGGCCAAAGCTGAAGAAGTTTATTGCCTACTGCCAGTGAAGTGTGGCCCCGGCTGTGACGAGAGGCTGACAG  
547> T Q A V E G E I D L A K L K K F I A Y C R V K C G P R L S A E A A

**Bsp120I (2336)** **BsrBI (2367)**  
2301 AGAAACTGAAGAACCCTACATCATCATCGGAGCGGGCCCGTCCAGCAGAGAGGACAGTACCAGCCGCTCCAGCATCCCCATCACTGTGGCGCAGCT  
580> E K L K N R Y I I M R S G A R Q H E R D S D R R S S I P I T V R Q L

**FspI (2411)**  
2401 GGAGGCCATTGTGCGCATCGCGGAAGCCCTCAGCAAGATGAAGCTGCAGCCCTTCGCCACAGAGGCAGATGTGGAGGAGGCCCTGCGGCTCTTCCAAGTG  
613> E A I V R I A E A L S K M K L Q P F A T E A D V E E A L R L F Q V

2501 TCCACGTTGGATGCTGCCTTGTCCGGTACCCTGTCCAGGGTGGAGGGCTTCCACAGCCAGGAGACCAGAGATGCTGAGCCGCATCGAGAAGCAGCTCA  
 647▶ S T L D A A L S G T L S G V E G F T S Q E D Q E M L S R I E K Q L

2601 AGCGCCGCTTTGCCATTGGCTCCAGGTGTCTGAGCACAGCATCATCAAGGACTTCACCAAGCAGAAATACCCGGAGCAGCCATCCACAAGGTGCTGCA  
 680▶ K R R F A I G S Q V S E H S I I K D F T K Q K Y P E H A I H K V L Q

2701 GCTCATGCTGCGGCGGGCAGATCCAGCATCGCATGCAGCGCAAGGTTCTCTACCGCTCAAGTGAGTCGCGCCGCTCACTGGACTCATGGACTCGCT  
 713▶ L M L R R G E I Q H R M Q R K V L Y R L K •

2801 AGCTGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTG

2901 CTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAACATTGCATTCAATTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTTA

3001 AAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCATAAATACAGCATAGCAAACCTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAG

3101 GGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTTCC

3201 AAGGTTTGAAGTACTCTTCATTCTTTATGTTTTAAATGCAGCTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATT

3301 GCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACC

3401 TTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGCTGACTTACTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGGC

3501 ATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTTCGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCA

3601 TCAGATAGGGGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCAGCAGACCCCAATGGCAATGGCTTACAGCACAGACAGTGACCC

3701 TGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCATAGAGCATGGT

3801 GATCTTCTCAGTGGCAGCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCTGATTATACTATGCC

3901 GATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCAC

4001 CGTACAGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACG

4100 TCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCAAAAACCGCATCATCATGGTAATAGCGATGACTA

4200 ATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCCATAGGTCATGTAAGTGGCATAATGCCAGGCGGGCATTACCGTCAATGACGTCAATAGGGGGCGT

4300 ACTTGGCATATGATACACTTGTACTGCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATG

4400 GGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGTCAAGCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAAAT

4498 AAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA

4598 AAAATCGACGCTCAAGTCAGAGTGGCGAAACCCGACAGGACTATAAAGATACAGGCGTTTTCCCTGGAAGCTCCCTGTCGCTCTCTGTTCCGAC

4698 CCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTCGGAAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGTTGATGGTCTGTT

4798 CGCTCAAGCTGGGCTGTGTCACGAACCCCCGTTCCAGCCGACCGTGGCGCTTATCCGGTAACTATCGTCTTGTGTTGAGTCAACCCGTAAGACAGACT

4898 TATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACAC

4998 TAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTATCGGCAACAAACACCGCTGGTAGC

5098 GGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGCTGACGCTCAGTGAAGC

5198 AAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGT

5298 TTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCA

5398 GAACATTTCTCTATCGAA