



**PvuI (7)**  
**SgfI (6)**
**MfeI (82)** **EcoNI (96)**

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)** **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

**NcoI (560)**

**KasI (535)**
**BstEII (555)** **AgeI (552)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCATGGGAAATGAGCAAGTTATCCTTTGGAAATGTGCTC  
 1▶ M G N E A S Y P L E M C S

**HindIII (646)**

601 ACACCTTTGATGCGGATGAAATTAAGGCTAGGAAAGAGATTTAAGAAGCTTGATTTGGACAATTCTGTTCTTTGAGTGTGGAAGAGTTCATGTCTCTG  
 13▶ H F D A D E I K R L G K R F K K L D L D N S G S L S V E E F M S L  
 701 CCTGAGTTACAACAAGATCCTTTAGTACAGCGAGTAATAGATATATTCACACAGATGGGAATGGAGAAGTAGACTTTAAAGAATTCATTGAGGGCGTCT  
 47▶ P E L Q Q N P L V Q R V I D I F D T D G N G E V D F K E F I E G V  
 801 CTCAGTTCAGTGTCAAAGGAGATAAGGAGCAGAAATTGAGTTTCTTTCCGATCTATGACATGGATAAAGATGGCTATATTTCCAATGGGAACTCTT  
 80▶ S Q F S V K G D K E Q K L R F A F R I Y D M D K D G Y I S N G E L F  
 901 CCAGGTATTGAAGATGATGGTGGGAACAATCTGAAAGATACAGATTACAGCAAATTTAGACAAAACATAATAAATGCAGATAAGGATGGAGATGGA  
 113▶ Q V L K M M V G N N L K D T Q L Q Q I V D K T I I N A D K D G D G

**NheI (1094)**

**EcoRV (1042)**
**BstXI (1091)**

1001 AGAATATCCTTTGAAGAATTCTGTGCTGTTGTAGGTGGCTAGATATCCACAAAAGATGGTGGTAGATGTGTGACTCTTATCAGAGAGTACCAGCTAGC  
 147▶ R I S F E E F C A V V G G L D I H K K M V V D V •

**MscI (1100)**

1101 TGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTT

**HpaI (1232)**
**MfeI (1243)**

1201 TATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAG  
 1301 CAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACTCAAATCAAGCTCTACTTGAATCCTTTTCTGAGGGA  
 1401 TGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAG

**SspI (1567)** **SwaI (1581)**

1501 GTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCA

**EcoO109I (1642)**

1601 ATGAAAATAAATGTTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTT  
 1701 AATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTGATGTTCTGGTGTACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATT  
 141▶ N R T Y K L P I L E E I T T K V L K G N

**SacI (1842)** **BstXI (1871)**

1801 CATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCA  
 120▶ 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  
 1901 GAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTGTCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGC  
 86▶ S 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

**StuI (2006)**

2001 CAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGCTCCTCATAGAGCATGGTGTAT  
 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

**BspHI (2156)**

**BbsI (2152)**

**XmnI (2148)**

2101 CTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGTGCTATTATACTATGCGCAT  
 20▶ K E T A V E V L E L D Q Q S I N F T K M

**SacI (2271)**

2201 ATACTATGCCGATGATTAATTGTCAAAACAGCGTGATGGCGTCTCCAGCTATCTGACGGTTCACATAAACGAGCTCTGCTTATATAGACCTCCACCCG

**SpeI (2369)**

2300 TACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTC

**SnaBI**

2399 AATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCAGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAAT

2499 ACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTAC

**NdeI (2602)**

2599 TTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGG

**PstI (2781)**

**SdaI (2780)**PacI (2788)

2699 AACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCC **T G C A G G T T A A T T A A**

**BspLU11I (2798)**

2797 **GAACATGTGAGCAAAAAGGCCAGCAAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAA**

2897 **AATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTCCGACCC**

2997 **TGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCG**

**ApaLI (3112)**

3097 **CTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTA**

3197 **TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTA**

3297 **GAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGG**

3397 **TGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAA**

**EagI (3548)**

PacI (3528) SwaI (3537) **NotI (3547)**

3497 **AACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTT**

3597 TTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGA

3697 ACATTTCTCTATCGAA