



**PvuI (7)**  
**SgfI (6)** **EcoNI (96)**  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** **EcoNI (287)**  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACACGCCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

**KasI (535)** **AgeI (552)** **BspHI (560)** **BstBI (570)** **XmnI (587)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGAGAATTTGAAACACATTTGAGAAGTATTTCCAT  
13▶ M R I S K P H L R S I S I  
601 CCAGTGTACTTGTGTTTACTTCTAAACAGTCATTTTCTAACTGAAGCTGGCATTTCATGTCTTCATTTGGGCTGTTTCAGTGCAGGGCTTCTAAAACA  
13▶ Q C Y L C L L L N S H F L T E A G I H V F I L G C F S A G L P K T

**BglII (744)** **NsiI (760)**  
701 GAAGCCAAGTGGTGAATGTAATAAGTGATTTGAAAAAATTGAAGATCTTATCAATCTATGCATATTGATGCTACTTTATATACGGAAAGTGATGTT  
47▶ E A N W V N V I S D L K K I E D L I Q S M H I D A T L Y T E S D V

**BspEI (865)** **BspHI (882)**  
801 ACCCCAGTTGCAAAGTAACAGCAATGAAGTGCTTCTCTTGAGTTACAGTTATTTCACTTGAGTCCGGAGATGCAAGTATTTGATACAGTAGAAAA  
80▶ H P S C K V T A M K C F L L E L Q V I S L E S G D A S I H D T V E N

**SspI (988)**  
901 TCTGATCATCCTAGCAAACAACAGTTTGTCTTCTAATGGGAATGTAACAGAATCTGGATGCAAAGAATGTGAGGAAGTGGAGGAAAAAATATTAAGAA  
113▶ L I I L A N N S L S S N G N V T E S G C K E C E E L E E K N I K E

**MscI (1067)**  
1001 TTTTGCAGAGTTTTGTACATATTGTCCAAATGTTTCATCAACACTTCTTGATTGCAATTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTT  
147▶ F L Q S F V H I V Q M F I N T S •

**BsrGI (1014)** **NheI (1061)** **HpaI (1199)**  
1101 GGACAAACCACAAGTGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAG

**EcoRI (1295)**  
1201 TTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTTACAAATGTGGTATGGAATT  
1301 CTAATAACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCA

**SapI (1477)**  
1401 ATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATAGTGATTTTCCCAAGGTTTGAAGTACTCTTCAATTTCTTTATGTTTTA

**SspI (1534)** **Swal (1548)**  
1501 AATGCACTGACCTCCACATTCCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAAATCC

**EcoO109I (1609)**  
1601 AGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCT  
1701 AGCTTTAGTTCTGGTACTTGAGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATA  
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

**SacI (1809)** **BstXI (1838)**  
1801 GTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGCA  
109▶ 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

**StuI (1973)**  
1901 AAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTACGACAGACAGTGACCCTGCCAATGTAGGCGCTCAATGTGGACAGCAGAGATGA  
75▶ F 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  
2001 TCTCCCAGTCTGGTCCGATGGCCGCCGACATGGTGCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACAGCTCCAGATC  
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 (2115)** **AseI (2181)**  
2101 CTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCG  
9▶ Q Q S I N F T K M

**SacI (2238)**  
2201 TGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCG

**SpeI (2336)**  
2301 GAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAA

**SnaBI (2464)**  
2401 ACCGCTATCCACGCCATTGATGTAAGTGCACAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAA

NdeI (2569)

2501 GGTCATGTA CTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA CTGCCAAGTGG

2601 GCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGCGGGGGT

---

PacI (2755)

PstI (2748)  
SdaI (2747)

BspLU11I (2765)

2701 CGTTGGGCGGT CAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAAC

2801 CGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAG

2901 GACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTC

---

ApaLI (3079)

3001 GGGAAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAG

3101 CCCGACCGCTGCGCTTATCCGTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCA

3201 GAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGCCTAACTACGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCC

3301 AGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGA

---

PacI (3495)

3401 AAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAAT

---

EagI (3515)

SwaI (3504) NotI (3514)

3501 TAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACATAACATACGCTCTCCATCAA

3601 AACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA