



**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
1 GGATCTGGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** EcoNI (287)  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)** **NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

**NcoI (560)**  
**BstEII (555)** **BstEII (571)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTACCATTGGCTAAAGGTGACCCCAAGAAACCAAGGGCAAGAT  
601 GTCCGCTTATGCCTTCTTTGTGCAGACATGCAGAGAAGAACAATAAGAAGAAAAACCCAGAGGTCCTGTCAATTTTGGGAATTTTCCAAGAAGTGTCT  
13▶ S A Y A F F V Q T C R E E H K K K N P E V P V N F A E F S K K C S

**Tth111I (711)** **BbsI (708)**  
701 GAGAGGTGGAAGACGATGTCGGGAAAGAGAAATCTAAATTTGATGAAATGGCAAAGGAGCAGATAAAGTGCCTATGATCGGAAATGAAGATTATGGAC  
47▶ E R W K T M S G K E K S K F D E M A K A D K V R Y D R E M K D Y G

**BamHI (825)** **EcoRI (877)**  
801 CAGCTAAGGAGGCAAGAAGAAGAGTCTAATGCTCCAAAAGGCCACCGTCTGATTCTTCTGTTCTGTTTCCAGAAATCCGCCCCAAGATCAAATC  
80▶ P A K G G K K K K D P N A P K R P P S G F F L F C S E F R P K I K S  
901 CACAAACCCCGCATCTCTATTGGAGACGTGGCAAAAAGCTGGGTGAGATGTGAATAATTTAAATGACAGTAAAAGCAGCCTTACATCACTAAGCGC  
113▶ T N P G I S I G D V A K K L G E M W N N L N D S E K Q P Y I T K A  
1001 GCAAAGCTGAAGGAGAAGTATGAGAAGGATGTTGCTGACTATAAGTCAAAGGAAAGTTTGTGTTGCAAAGGCTCTGCTAAAGTTGCCCGAAAAAGG  
147▶ A K L K E K Y E K D V A D Y K S K G K F D G A K G P A K K V A R K K

**MscI (1182)** **NheI (1176)**  
1101 TGGAGAGGAAGATGAAGAAGAGGAGGAGAAGAAGAGGAGGAGGAGGAGGAGGATGAATAAAGAACTGTTTGTAGTGGCCAGACATGATAAGA  
180▶ V E E E D E E E E E E E E E E E E E E D E •  
1201 TACATTGATGAGTTGGACAAACCACAACACTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATA

**HpaI (1314)** MfeI (1325)  
1301 GCTGCAATAAACAAGTTAAACAACAACAAATTGCATTTCATTTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAA

**EcoRI (1410)**  
1401 ATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCAT  
1501 CAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTCTTCA

**SspI (1649)**  
1601 TTTCTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTT  
1701 TATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCA  
1801 AGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAA  
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

**SacI (1924)** **BstXI (1953)**  
1901 GCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACA  
114▶ 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 Y P H R V

**StuI (2088)**  
2001 GCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGT  
80▶ 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 I Y A E I H  
2101 GGACAGCAGAGATGATCTCCCAGTCTTGGTCTGTAGGCGCCCGACATGGTCTTGTGCTCTATAGAGCATGGTATCTTCTCAGTGGCGACCTC  
47▶ 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 K E T A V E

**BspHI (2238)** **BbsI (2234)**  
**XmnI (2230)** **AseI (2296)**  
2201 CACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGAAGTATTATACTATGCCGATATACTATGCCGATGATTA  
14▶ V L E L D Q Q S I N F T K M

**SacI (2353)**  
2301 ATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCCAT

**SpeI (2451)**  
2400 TTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTGG

**SnaBI (2579)**

2499 AAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCAA

**NdeI (2684)**

2599 GTAGGAAAGTCCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTT

2699 GATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGA

**PstI (2863)**

**SdaI (2862)**PacI (2870)

**BspLU11I (2880)**

2799 CGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGG

2897 CCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAG

2997 AGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCCTGCCGTTACCGGATACC

**ApaLI (3194)**

3097 TGTCCGCCTTCTCCCTTCGGAAGCGTGGCGCTTTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGT

3197 GCACGAACCCCCGTTGAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCC

3297 ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTA

3397 TCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCCACCGCTGGTAGCGGTGTTTTTTTTGTTTGGCA

3497 GCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATT

**EagI (3630)**

PacI (3610)

**NotI (3629)**

3597 TTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGTTTTTTGTGTGAATCGTAACT

3697 AACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA