



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

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

**NgoMIV (441)**  
**NgoMI (441)**  
**NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCCTGCTTGCTCAACTCTACGTCTTTGTTTCGTTT

**KasI (535)** **SphI (560)** **StuI (581)**  
**AgeI (552)** **Eco147I (581)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAGCATGCCGTCGAACTGGAGAAGGCCTTGAGCAACCTCAT  
1▶ M P S E L E K A L S N L I  
XmnI (654)  
601 TGATGTCTACCACAATTATTCCAATATACAAGGAAATCACCATGCCCTCTACAAGAATGACTTCAAGAAAATGGTCACTACTGAGTGTCTCAGTTTGTG  
13▶ D V Y H N Y S N I Q G N H H A L Y K N D F K K M V T T E C P Q F V  
701 CAGAATATAAATATCGAAAACCTGTTTCCAGAGAATTGGACATCAATAGTGACAATGCAATTAACCTTCGAGGAGTTCCTTGCGATGGTGATAAAAGTGGGTG  
47▶ Q N I N I E N L F R E L D I N S D N A I N F E E F L A M V I K V G  
**MscI (854)**  
**BalI (854)**  
801 TGGCATCTCACAAGACAGCCACAAGGAGTAGCAGAGCTTCTGGCCTAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAA  
80▶ V A S H K D S H K E •

**HpaI (986)** MfeI (997)  
901 CTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAACAA

**EcoRI (1082)**  
1001 TTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCA  
1101 TAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCT  
1201 GTTTGCAGCCTCACCTTCTTTATGAGGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCT

**SspI (1321)** **SwaI (1335)** **EcoO109I**  
1301 CCCACATTCCTTTTTAGTAAAAATTCAGAAAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGC  
1401 CCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCT  
141▶ • N R

**SacI (1596)**  
1501 GGTGACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGC  
138▶ 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 D S I L  
**BstXI (1625)**  
1601 TCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCC  
104▶ 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 F D K Q G  
**StuI (1760)**  
**Eco147I (1760)**  
1701 CGTTGCTCACAGCAGACCCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGAGGCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTT  
71▶ 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 E G T K  
1801 GGTCTGATGGCGCCCGGACATGGTCTTGTGCTCATAGAGATGGTGTATCTCAGTGGCGACCTCCACAGCTCCAGATCTGCTGAGAGATG  
38▶ 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 Q Q S I  
**BspHI (1910)** **VspI (1968)**  
**XmnI (1902)** **AseI (1968)**  
1901 TTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTC  
4▶ N F T K M

**SacI (2025)**  
2001 CAGCTTATCTGACGGTTCATAAACGAGCTCTGTTATATAGACCTCCACCGTACACGCTACCGCCATTTGGTCAATGGGGCGGAGTTGTTACGA

**SpeI (2123)**  
2100 CATTTTGGAAAGTCCCGTTGATTACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCA

**SnaBI (2251)** **Eco105I (2251)**  
2199 CGCCATTGATGACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGACT

**NdeI (2356)**  
2299 GGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGACTGCCAAGTGGGCAGTTTACCG

2399 TAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGT

**PstI (2535)**

**SdaI (2534)** **PacI (2542)** **BspLU11I (2552)**

2499 CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGTTAA TTAAGACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAG

2597 GCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCAGAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAA

2697 GATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGT

**ApaI (2866)**

2797 GCGCCTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCCG

2897 TCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGT

2997 ATGTAGGCGGTGCTACAGAGTTCTGAAGTGGTGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTT

3097 CGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGA

**PacI (3282)** **SwaI (3291)**

3197 TCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTA

**EagI (3302)**

**NotI (3301)**

3297 AATCAGCGGCCGAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAAC

3396 GAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTATCGAA