



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82) EcoNI (96)

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)**  
**Psp1406I (203)** 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC EcoNI (287) **Bsu36I (291)**  
**PvuII (239)**  
**EcoNI (287)**

301 GCCATCCACGCGGTTGAGTGCCTGTCGCCCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

**KasI (535)** 501 TCTGTTTGGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGTAACATGTACAGGATGCAACTCTGTCTTGCATTGCACTAAGT BspLU11I (559) AgeI (552) BsrGI (562)  
1 M Y R M Q L L S C I A L S

**ApaLI (619)** 601 CTTGCACTTGTACAAAACAGTGCACCTACTTCAAGTTCTACAAAAGAAAACACAGCTACAACCTGGAGCATTACTTCTGGATTTACAGATGATTTTGAATG  
14 L A L V T N S A P T S S S T K K T Q L Q L E H L L L D L Q M I L N

**AseI (702)** 701 GAATTAATAATTACAAGAATCCAAACTCACCAGGATGCTCACATTTAAGTTTTACATGCCAAGAAGCCACAGAAGTAAACATCTTCAGTGTCTAGA XbaI (794)  
47 G I N N Y K N P K L T R M L T F K F Y M P K K A T E L K H L Q C L E  
80 A A A G A A C T C A A A C C T C T G G A G G A A G T G C T A A A T T A G C T C A A A G C A A A A C T T C A C T T A A G A C C C A G G G A C T T A A T C A G C A A T A T C A A C G T A A T A G T T  
80 E E L K P L E E V L N L A Q S K N F H L R P R D L I S N I N V I V  
90 C T G G A A C T A A A G G A T C T G A A A C A C A T T C A T G T G A A T A T G C T G A G A C A G C A A C C A T T G T A G A A T T T C T G A A C A G A T G G A T T A C T T T T G T C A A A  
114 L E L K G S E T T F M C E Y A D E T A T I V E F L N R W I T F C Q

**MscI (1029)** 1001 GCATCATCTCAACACTGACTTGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCACAACCTAGAATGCAGTGAATAAATGCTT  
147 S I I S T L T •

**NheI (1023)**

**HpaI (1161)** 1101 TATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAACATTCATTCTTTATGTTTCAGGTT MfeI (1172)

**EcoRI (1257)**  
1201 CAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGAATTCATAAATACAGCATAGCAAACTTTAACCTCCAATCA  
1301 AGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCCTCACCTTCTTTCATG

**SspI (1496)**  
1401 GAGTTTAAGATATAGTGTATTTTCCAAGGTTGAACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGATAAATA

**SwaI (1510)** 1501 TTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGT  
1601 AGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGGATGAGTTCC  
141 N R T Y K L P I L E

**SacI (1771)**  
1701 TCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGA  
129 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 E R C M G C P S V

**BstXI (1800)** 1801 CCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGC  
96 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 N S V A S G I A

**StuI (1935)** 1901 AATGGCTTCAGCACAGACAGTACCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGG  
63 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 T R I A A G V H

**BspHI (2085)**  
**BbsI (2081)**  
**XmnI (2077)**  
2001 TGCTTGTGCTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCC  
29 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 N F T K M

**AseI (2143)**  
2101 TATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAAC

**SacI (2200)** 2201 GAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTGTTGATTTA C SpeI (2298)

2301 TAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCGC

**SnaBI (2426)**  
2401 ATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGGCATAATGCCAGGGGGCCATTTAC

**NdeI (2531)**

2501 CGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATG  
2601 GAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGCGGGCCATTTACCCTAAGT

---

**PstI (2710)**  
**SdaI (2709)** **PacI (2717)** **BspLU11I (2727)**

2701 TATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGG  
2799 CTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCT  
2899 CCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCATAGCTCACGCTGTAG

---

**ApaI (3041)**

2999 GTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTT  
3099 GAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGA  
3199 AGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATC  
3299 CGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCT

---

**EagI (3477)**  
**PacI (3457)** **SwaI (3466)** **NotI (3476)**

3399 ACGGGTCTGACGCTCAGTGAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTT  
3499 ATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCT  
3599 GTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA