



**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAAGTGGCGGGGTAAGTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**Psp1406I (203)** **HindIII (245)** Bsu36I (291)  
 EcoNI (287)  
 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
 401 GGGCCTTTGTCCGGGCTCCCTTGGAGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

**NcoI (560)**  
**BstEII (555)**  
**AgeI (552)**  
 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCATTGGAGAGCTCTGGCAAGATGGAGAGTGGAGCCGGCCA  
 1 M E S S G K M E S G A G Q

SacII (680)  
 601 GCAGCCGAGCCCCGAGCCCTTCTGCCTCCCGCAGCCTGCTTCTTTGCGACCGCGCGGGCGGGCAGCGCGCGGGCGGCGGCGAGCTCAGAGCGCG  
 13 Q P Q P P Q P F L P P A A C F F A T A A A A A A A A A A A Q S A

NotI (676)  
 701 CAGCAACAACAGCCGAGCGCCGCGCAGCAGCGCCGCGAGCTGAGCCCGTGGCCGACAGCCAGCCCTCAGGGGGCGGTCAACAGTCAAGCGGCAAGC  
 47 Q Q Q Q P Q A P P Q Q A P Q L S P V A D S Q P S G G G H K S A A K

**Bsu36I (767)**  
**Eco47III (812)** **BspEI (825)**  
 801 AGGTCAAGCGCCAGCGCTCGTCTCTCCGGAAGTATGCGCTGCAAAACGCCGGCTCAACTTCAGCGGCTTCGGCTACAGCCTGCCACAGCAGCAGCCGGC  
 80 Q V K R Q R S S S P E L M R C K R R L N F S G F G Y S L P Q Q Q P A

**AscI (906)**  
 901 CGCCGTGGCGCGCCGCAACGAGCGCAGCGCAACCGGGTCAAGTTGGTCAACCTGGGCTTTGCCACCCTCCGGGAGCATGTCCCAACGGCGCGGCAAC  
 113 A V A R R N E R E R N R V K L V N L G F A T L R E H V P N G A A N

**PstI (1054)** **Eco47III (1087)**  
 1001 AAGAAGATGAGCAAGGTGGAGAGCTGCGCTCGCGGTGCGAGTACATCCGCGCTGCAGCAGCTGCTGGACGAGCAGCAGCGGCTGAGCGCTGCCTTTCT  
 147 K K M S K V E T L R S A V E Y I R A L Q Q L L D E H D A V S A A F

**BamHI (1195)**  
 1101 AGGCGGGCTCCTGTCGCCACCATCTCCCAACTACTCCAACGACTTGAAGTCTATGGCGGTTCTCCGGTCTCGTCTACTCCTCCGACGAGGGATC  
 180 Q A G V L S P T I S P N Y S N D L N S M A G S P V S S Y S S D E G S

**MscI (1280)**  
**EcoO109I (1257)** **NheI (1274)**  
 1201 CTACGACCCTTTAGCCAGAGGAACAAGAGCTGCTGGACTTTACCAACTGGTTCTGAGGACCTGCCAGGCTCTGCTAGCTGGCCAGACATGATAAGATA  
 213 Y D P L S P E E Q E L L D F T N W F •

1301 CATTGATGAGTTTGACAACCACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGC

**HpaI (1412)** MfeI (1423)  
 1401 TGCAATAAACAAGTTAAACAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAAT

**EcoRI (1508)**  
 1501 GTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCA  
 1601 GGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTCTTCATT

**SspI (1747)** **SwaI (1761)**  
 1701 TCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTA

**EcoO109I (1822)**  
 1801 TTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAG  
 1901 AAAGCGAGCTTCTAGCTTTAGTCTCGGTGACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTTCGCAATTCATCTCAATGAGCACAAGC  
 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

**BstXI (2051)**  
 2001 AGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGC  
 113 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 A

**StuI (2186)**  
 2101 CACAATGGTGTCAAAGTCTTCTGCCGCTTCTGACAGCAGACCAATGGCAATGGCTTTCAGCAGACAGCAGTGCCTGCAATGTAGGCTCAATGTGG  
 80 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  
 2201 ACAGCAGAGATGATCTCCCAAGTCTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCA  
 46 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 V

**BspHI (2336)**  
**BbsI (2332)**  
**XmnI (2328)** **AseI (2394)**  
 2301 CCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGGTCTATTATACTATGCCGATATACTATGCCGATGATTAAT  
 13 L E L D Q Q S I N F T K M  
 2401 TGTCAAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTT

2500 GCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAA  
SpeI (2549) ←

2599 ATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGT  
SnaBI (2677)

2699 AGGAAAGTCCATAAGGTCACTGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGA  
NdeI (2782)

2799 TGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACG

2899 TCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAAAGCCTGCGAGGTTAA TTAAGAACATGTGAGCAAAGGCC  
PstI (2961) SdaI (2960) PacI (2968) BspLU11I (2978) ←

2997 AGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAG

3097 GTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTCCGACCTGCCGCTTACCGGATACCTG

3197 TCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGC  
ApaLI (3292)

3297 ACGAACCCCGTTACGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCAC

3397 TGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATC

3497 TGGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGTGGTAGCGGTGGTTTTTTTGTGGCAAGC

3597 AGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACACGTTAAGGGATTTT

3697 GGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAA  
PacI (3708) SmaI (3717) NotI (3727)

3797 CATACGCTCTCCATCAAAAACAAAACGAAAACAAAACAACTAGCAAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA