



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

101 GAGAAAGTGGCGGGGTAACCTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

**AgeI (552)** **BspHI (568)**  
501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTAGGAGGGCCATCATGAGTGGTGTGATGATGACATGGCGTGT  
1 M S G V D D D M A C

**NsiI (631)**  
601 CATAAAATACCAGTGGAGGCCGACTTCTGTATGCATACTCCACAGCAGCTGTTATTATTCTTGGCGAAATCAAAGGATGGCTCCTGGTTCATCCAGT  
11 H K I P V E A D F L Y A Y S T A P G Y Y S W R N S K D G S W F I Q

**HpaI (762)**  
701 CGTTTTGTCCATGCTGAAACAGTATGCCGACAAGCTTGAATTTATGCACATCTTACCCGGTTAACCGAAAGGTGGCAACAGAATTTGAGTCCCTTTTC  
44 S L C A M L K Q Y A D K L E F M H I L T R V N R K V A T E F E S F S

**HindIII (732)** **XmaI (757)**  
801 CTTTGACGCTACTTTTCATGCAAAAGAAACAGATTCATGTATTGTTCCATGCTCACAAAAGAACTCTATTTTTATCAGGATGAAGTTGATGGGATGGAG  
77 F D A T F H A K K Q I P C I V S M L T K E L Y F Y H D E V D G M E

**XcmI (928)**  
901 AACACTGAAAACCTCAGTGGATTCAAATCCATTAATAATTTGGAACCAAAGATCATAACATGGAAGCGAATCAATGGACTCTGGAATATCCCTGGACAACA  
11 N T E N S V D S K S I K N L E P K I I H G S E S M D S G I S L D N

**AseI (1041)**  
1001 GTTATAAAATGGATTATCCTGAGATGGGTTTATGTATAATAATTAATAATAAAGATTTTCATAAAAGCACTGGAATGACATCTCGGTCTGGTACAGATGT  
144 S Y K M D Y P E M G L C I I I N N K N F H K S T G M T S R S G T D V

**Bsu36I (1112)** **BbrPI (1168)**  
1101 CGATGCAGCAAACCTCAGGGAAACATTCAGAAAATTGAAATATGAAGTCAAGAAATAAAATGATCTTACACGTGAAGAATTGTGGAATTGATGCGTGAT  
177 D A A N L R E T F R N L K Y E V R N K N D L T R E E I V E L M R D

**NcoI (1253)**  
1201 GTTCTAAAGAAGATCACAGCAAAGGAGCAGTTTTGTTTGTGTGCTTCTGAGCCATGGTGAAGAAGGAATAATTTTTGGAACAAATGGACCTGTTGACC  
211 V S K E D H S K R S S F V C V L L S H G E E G I I F G T N G P V D

**StuI (1375)**  
1301 TGAATAAAATAACAACTTTTTTCAGAGGGGATCGTTGTAGAAGTCTAACTGGAACCCAAACTTTTTATTATTAGGCTGCGGTGGTACAGAAGTGA  
244 L K K I T N F F R G D R C R S L T G K P K L F I I Q A C R G T E L D

**MscI (1428)**  
**NheI (1422)**  
1401 CTGTGGCATTGAGACAGACTAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGCAGTGAATAAATGCTTT  
277 C G I E T D •

**HpaI (1560)** **MfeI (1571)**  
1501 ATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACCAAGTTAACAAACAATTGCATTCTTTTATGTTTCAGGTTT

**EcoRI (1656)**  
1601 AGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTAACCTCCAAATCAA  
1701 GCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGG

**SapI (1838)** **SspI (1895)**  
1801 AGTTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTCTTCATTCTTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATAT

**SwaI (1909)** **EcoO109I (1970)**  
1901 TCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTA

2001 GTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCT  
141 • N R T Y K L P I L E E

**SacI (2170)** **BstXI**  
2101 CAATGGTGGTTTTGACCAGTTCGCAATTCATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCGCATGCCACAGGGGCTGAC  
129 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

2201 CACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGCTTGTCTACAGCAGACCCAATGGCA  
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 (2334)**  
2301 ATGGCTTCAGCACAGACAGTGCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATGGT  
62 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 H

**BbsI (2480)**  
2401 GCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCTCATGGTGGCCCTCCT  
29 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

2501 ATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACG SacI (2599)  
2601 AGCTCTGCTTATATAGACCTCCCACGTACACGCCTACGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACT SpeI (2697)  
2701 AGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCA  
SnaBI (2825)  
2801 TCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGGCGGCCATTTACC  
NdeI (2930)  
2901 GTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGG  
3001 AAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCTGTTGGGCGGTACGCCAGGGCGGCCATTTACCGTAAGTT  
PacI (3116)  
PstI (3109)  
SdaI (3108) BspLU11I (3126)  
3101 ATGTAACGCCTGCAGGTTAAATAAGAACATGTGAGCAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTC  
3201 CGCCCCCTGACGAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCC  
3301 TCGTGCCTCTCCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTA  
ApaLI (3440)  
3401 TCTCAGTTCGGTGTAGGTCGTTCCGCTCCAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCCTGCGCCTTATCCGGTAACTATCGTCTTGAG  
3501 TCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGT  
3601 GGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGG  
3701 CAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACG  
EagI (3876)  
PacI (3856) SmaI (3865) NotI (3875)  
3801 GGGTCTGACGCTCAGTGGAAACGAAAACCTACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAAATATCTTTATT  
3901 TTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTC  
4001 CCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA