



**PvuI (7)**  
**SgfI (6)**  
1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTATGTCGTGACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**Psp1406I (203)** **HindIII (245)** **Bsu36I (291)**  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

**BstEII (555)** **AgeI (552)** **NcoI (560)** **BsrBI (572)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACC GGCGCTACCTGAGATCACCGGTACCATGGAGAACGGAGCGGTCTACAGTCCACCACCGAGGC  
1▶ M E N G A V Y S P T T E A

**XmaI (603)** **BssHII (622)** **BstAPI (693)**  
601 GGCCCCGGGCACTGGCAGGGTGC GCGCAGCGGCTGGCCGCTACTTCGTCCTGGCAGGCTCCCTTGGCATCGGCGCATCCTCAAAGGCTTGCAGCTG  
13▶ A P G T G R G A R S G L A A Y F V L G R L P W H R R I L K G L Q L

**StuI (759)**  
701 CTGCTGTCTCTCCTGGCCTTCATCTGTGAAGAGTTGTGTCCGAGTGTGGTTGTGTGGAGGCTCTACTTCTTTGAATTTGTGAGCTGTAGCGCTTTC  
47▶ L L S L L A F I C E E V V S E C G L C G G L Y F F E F V S C S A F

**ApaLI (838)**  
801 TCCTGAGCCTCCTCTGTGATCGTGTACTGCACCCAGTGCACGACAGAGTGGATACTGGAAAAGTCAAGTCATCGGATTTTACATCACCTGGGAAC  
80▶ L L S L L L L I V Y C T P V H D R V D T G K V K S S D F Y I T L G T

**EcoO109I (949)** **XcmI (998)**  
901 TGGGTGTGTCTCCTGCTGGCATCTATCATT TTTGTCTCCACCATCTGGGACCTCAGTGAATGCTGCAATTGTGTTGGCTTCTGGCAAGCTCC  
113▶ G C V F L L A S I I F V S T H S G T S A E I A A I V F G F L A S S

1001 ATGTTCTACTGGACTTCGTTGTGATGCTGTGTGAGAAGCTGCGGAGAGCCTGAGAAAAGCCGAGAACAACGCAAAGGTGGAAGCCTCACCGAAC  
147▶ M F L L D F V V M L C E K L R E S P L R K P E N N A K V E A L T E

**MscI (1121)** **NheI (1115)**  
1101 CACTGAACGCTTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTG  
180▶ P L N A •

**HpaI (1253)**  
1201 AAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACAAATTGCATTCATTTTATGTTTCAGGTTCAAGGGGA

**EcoRI (1349)**  
1301 GGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTA  
1401 CTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTCTTTTCATGGAGTTAA

**SapI (1531)** **SspI (1588)**  
1501 GATATAGTGATTTTCCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATAGTAAATATTTCAGAAA

**SwaI (1602)** **EcoO109I (1663)**  
1601 TAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGAC  
1701 TTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGT  
141▶ N R T Y K L P I L E E I T

**SacI (1863)** **BstXI (1892)**  
1801 GGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCATGCCACAGGGGCTGACCACCCTG  
127▶ 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 V R

1901 ATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTT  
93▶ 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 I A E

**StuI (2027)**  
2001 CAGCACAGACAGTACCCTGCCAATGTAGGCCCAATGTGGACAGCAGAGATGATCTCCCGTCTGGTCTGATGGCCGCCCGACATGGTCTTGT  
60▶ 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 K N

**BbsI (2173)** **XmnI (2169)**  
2101 GTCCTCATAGAGCATGGTGTCTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCTGTTGGCCCTCTATAGTGA  
27▶ 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 (2235)** **SacI (2292)**  
2201 GTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCG

2301 CTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAA  
SpeI (2390)  
2401 ACAAACCTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCAT  
SnaBI (2518)  
2501 GGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTG  
NdeI (2623)  
2601 ACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCC  
2701 CTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAAC  
PacI (2809)  
PstI (2802)  
SdaI (2801) BspLU11I (2819)  
2801 GCCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGAAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCC  
2901 CTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCG  
3001 CTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCCTTCGGAAGCGTGGCGCTTTCATAGCTCACGCTGTAGGTATCTCAGT  
ApaLI (3133)  
3101 TCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACC  
3201 CGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCC  
3301 TAACTACGGCTACACTAGAAGAAGCAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAA  
3401 ACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTG  
EagI (3569)  
PacI (3549) SmaI (3558) NotI (3568)  
3501 ACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTA  
3601 CATCTGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTG  
3701 CAAGTGCAGGTGCCAGAACATTTCTCTATCGAA