



100

**PvuI (7)**  
**SgfI (6)** 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82)

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGCTAGGTAAGTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
**NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

**NcoI (560)**  
**BstEII (555)**  
**KasI (535)** **AgeI (552)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGGAACTGTCTGCACAGGGCGGAGCTCTCCCCCTC  
1 M G N C L H R A E L S P S

**BstBI (625)** **EcoRI (639)**  
601 AACTGAGAAGTCAAGTCAGCTGGACTTTCGAAGATGTATGGAATTTCTTCTATGGTGTGAATGATTCTTCCCAGATGGAGACTATGGTGCCAACCTGGAA  
13 T E N S S Q L D F E D V W N S S Y G V N D S F P D G D Y G A N L E

**NheI (784)**  
701 GCAGTGTCCCTGCCACTCCTGTAACCTGCTGGATGACTCTGCACTGCCTTCTTCATCCTCACCAGTGTCTGGGTATCCTAGTAGCAGTGTCC  
47 A A A P C H S C N L L D D S A L P F F I L T S V L G I L A S S T V  
801 TCTTCATGCTTTTTCAGACCTCTCTTCCGCTGGCAGCTCTGCCCTGGCTGGCTGTCTGGCACAGCTGGCTGTGGGAGTGCCTTTCAGCATTGTGGT  
80 L F M L F R P L F R W Q L C P G W P V L A Q L A V G S A L F S I V V  
901 GCCGCTTTGGCCCCAGGGCTAGGTAGCACTCGCAGCTCTGCCCTGTGTAGCTGGGCTACTGTGTCTGGTATGGTCAAGCTTTGCCAGGCTTTGCTG  
113 P V L A P G L G S T R S S A L C S L G Y C V W Y G S A F A Q A L L

**StuI (1050)**  
1001 CTAGGGTGCATGCCTCCCTGGGCCACAGACTGGGTGCAGGCCAGGTCCAGGCCCTCACCTGGGGCTACTGTGGGAATTTGGGGAGTGGTGCCTAC  
147 L G C H A S L G H R L G A G Q V P G L T L G L T V G I W G V A A L

**MscI (1118)**  
1101 TGACACTGCCTGTACCCCTGGCCAGTGGTCTTCTGGTGGACTCTGCACCCTGATATACAGCAGGAGCTGAAGGCTTTGAGGCCACACACTGTAGC  
180 L T L P V T L A S G A S G G L C T L I Y S T E L K A L Q A T H T V A

**BsaBI (1287)**  
1201 CTGTCTTGCCATCTTTGTCTTGTGCCATTGGGTTTGGTGGAGCCAAGGGGCTGAAGAAGGCATTGGGTATGGGGCCAGGCCCTGGATGAATATCCTG  
213 C L A I F V L L P L G L F G A K G L K K A L G M G P G P W M N I L

**BspLU11I (1384)**  
1301 TGGCCTGGTTATTTTCTGGTGGCCTCATGGGTGGTCTAGGACTGGATTTCTGGTGGAGTCCAAGCTGTTGCTGTTGTCAACATGTCTGGCCAGC  
247 W A W F I F W W P H G V V L G L D F L V R S K L L L L S T C L A Q

**DraIII (1447)**  
1401 AGGCTCTGGACCTGCTGTAACCTGGCAGAAGCCCTGGCAATTTTGCATGTGTGGCTACGCCCTGCTCCTCGCCCTATTCTGCCACCAGGCCACCCG  
280 Q A L D L L L N L A E A L A I L H C V A T P L L L A L F C H Q A T R

**AvrII (1573)** **MscI (1585)**  
1501 CACCCTCTGCCCCTCTCTGCCCTCCCTGAAGGATGGTCTTCTCATCTGGACACCCTTGAAGCAAAATCCTAGCTAGGACTAGCTGGCCAGACATGATA  
313 T L L P S L P L P E G W S S H L D T L G S K S •

1601 AGATACATTGATGAGTTTGGACAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTA

**HpaI (1717)** **MfeI (1728)**  
1701 TAAGTGAATAAACAAGTTAAACAACAATTCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTA

**EcoRI (1813)**  
1801 CAAATGTGGTATGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGG  
1901 CATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTCT

**SspI (2052)** **SwaI (2066)**  
2001 TCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTT  
2101 TTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAATAGAAATTGGACA

2201 GCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTGGCATTCTCATCTCAATGAGCAC  
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

2301 AAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTG  
115 F C 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

**StuI (2491)**  
2401 ACAGCCCAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAA  
81 V A 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  
2501 TGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGAC  
48 H 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

BspHI (2641)

XmnI (2633)

AseI (2699)

2601 CTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGA  
 15 E V L E L D Q Q S I N F T K M

2701 TTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCC

SpeI (2854)

2800 CATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACT

SnaBI (2982)

2899 TGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGGATGACTAATACGTAGATGTACTGC

NdeI (3087)

2999 CAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACA

3099 CTTGATGTACTGCCAAGTGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTAT

PstI (3266)

SdaI (3265) PacI (3273) BspLU11I (3283)

3199 TGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAAAGCCTGCGAGGTTAA TTAAGAACATGTGAGCAAA  
 3297 AGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGT

3397 CAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGCGTTTTCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCTGCCGCTTACCGGAT

3497 ACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTG

ApaLI (3597)

3597 TGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCA

3697 GCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTG

3797 GTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTG

3897 CAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGG

EagI (4033)

PacI (4013) SwaI (4022) NotI (4032)

3997 ATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGTTTTTGTGTGAATCGTA

4097 ACTAACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCAAGTGCAGGTGCCAGAACATTTCTCTATCGA

4197 A