



100

PvuI (7) SgfI (6) MfeI (82)  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGTGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) Bsu36I (291)  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACGCGCCCGCCGCTACCTGAGGCC  
301 GCCATCCAGCGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) NgoMI (441) NaeI (441)  
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560) BstEII (555) AgeI (552) KasI (535)  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACTCTGAGATCACCGGTACCATGGGGCGGGCAGAGATGCCATCCTGGACGCTCTTGA  
1 M G R A R D A I L D A L E

Bsp120I (686)  
601 AAACCTGTGAGGGATGAACTCAAAAAGTTCAAGATGAAGCTGCTGACAGTGCAGTGCAGGAGGCTATGGGCGCATCCACGCGGGGCCCTGCTGCAG  
13 N L S G D E L K K F K M K L L T V Q L R E G Y G R I P R G A L L Q

BglIII (711)  
701 ATGGACGCATAGATCTCACTGACAAACTTGTGAGTACTATCTGGAGTGCATGGCTTGGAGCTCACAATGACTGTGCTTAGAGACATGGGCTTACAGG  
47 M D A I D L T D K L V S Y Y L E S Y G L E L T M T V L R D M G L Q

DraIII (892)  
801 AGCTGGCTGAGCAGCTGCAAACGACTAAAGAAGAGTCTGGAGCTGTGGCAGCTGCAGCCAGTGTCCCTGCTCAGAGTACAGCCAGAACAGGACTTTGT  
80 E L A E Q L Q T T K E E S G A V A A A A S V P A Q S T A R T G H F V  
901 GGACCAGCACAGGCAAGCACTCATTGCCAGGGTACAGAAAGTGGACGGAGTGTGGATGCTTTGCATGGCAGTGTGCTGACTGAAGGACAGTACCAGGCA  
113 D Q H R Q A L I A R V T E V D G V L D A L H G S V L T E G Q Y Q A

XmnI (1035) StuI (1091) Eco147I (1091)  
1001 GTTCGTGCAGAGACCACCAGCCAAGACAAGATGAGGAAGCTTTCAGCTTTGTTCCATCCTGGAACCTGACCTGCAAGGACTCCCTCCTCCAGGCCTTGA  
147 V R A E T T S Q D K M R K L F S F V P S W N L T C K D S L L Q A L

MscI (1152) BalI (1152) NheI (1146)  
1101 AGGAAATACATCCCTACTTGGTGTGAGCTGGAGCAGAGCTGAGGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCAACT  
180 K E I H P Y L V M D L E Q S •

HpaI (1284) MfeI (1295)  
1201 AGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATT

EcoRI (1380)  
1301 GCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATA  
1401 GCAAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGT  
1501 TTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACGCTCTTCATTTCTTATGTTTAAATGCACTGACCTCC

SspI (1619) SmaI (1633)  
1601 CACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATAGGCAGAATCCAGATGCTCAAGGCC  
1701 TTCATAATATCCCCAGTTTAGTGTGACTTAGGGAACAAAGGAACCTTTAATAGAAATTTGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGG  
1801 TGTACTTGAGGGGATGAGTTCCCTCAATGGTGGTTTTGACCAGCTTGCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTC  
137 Y K L P I L E 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

BstXI (1923)  
1901 TCTGCACATGCCACAGGGGTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCG  
104 R C M G C P S V 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

StuI (2058) Eco147I (2058)  
2001 TTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGG  
70 N S V A S G I A 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  
2101 TCCTGATGGCCGCCCCGACATGGTGTCTCATAGAGCATGGTGTATCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTT  
37 R I A A G V H 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

BspHI (2208) VspI (2266) AseI (2266) XmnI (2200)  
2201 GAAGTCTTATGATGGCCCTCTATAGTGTGATGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCA  
4 F T K M  
2301 GCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTACGACAT

2401 TTTGGAAAGTCCC GTT GATTTA **SpeI (2421)**  
ACTAGTCAAAA CAAACTCC CATTGACGTCAATGGGGTGGAGACTTG GAAATCCCCGTGAGTCAAACCGCTATCCACGC

2500 CCATTGATGTA CTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAAGTCC CATAAGGTCATGTACTGGG

2600 CATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAA

2700 ATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTCAG

2800 CCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCT **SdaI (2832)** **PacI (2840)** **BspLU11I (2850)**  
G CAG G TT AA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCC

2898 GCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA AAAATCGACGCTCAAGTCAGAGGTGGCGAAAACCCGACAGGACTATAAAGAT

2998 ACCAGGCGTTTCCCCTGGAAAGTCCCTCGTGCCTCTCCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGAAGCGTGGC

3098 GCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGC

3198 GCCTTATCCGGTA ACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATG

3298 TAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGG

3398 AAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCT

3498 CAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAAC TACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAAT

**EagI (3600)**  
**NotI (3599)**

3598 C AGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAA

3698 CAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTATCGAA