



PvuI (7)  
SgfI (6) MfeI (82)  
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)  
Psp1406I (203) PvuII (239) Bsu36I (291)  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)  
401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BstEII (555)  
KasI (535) AgeI (552) MscI (584)  
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGGCAGGCATCCCAGAGGTGGTGGCCATGGACTGTGA  
601 GATGGTGGGGCTTGGCCCTCAAAGGTTGAGTGGCTCGCCCGTGCAGCATTGTGAACATCCATGGCGCAGTCTGTATGACAAGTACATCCGACCCGAG  
13▶ M V G L G P Q R V S G L A R C S I V N I H G A V L Y D K Y I R P E  
1▶ M A G I P E V V A M D C E

DraIII (748)  
701 GGAGAGATCACGGACTACAGAACCAAGTCAGCGGGGTACGCCTCAGCACATGGTGAGGGCCACGCCATTTGGTGAAGCCAGGCTAGAGATCCTGCAGC  
47▶ G E I T D Y R T Q V S G V T P Q H M V R A T P F G E A R L E I L Q  
801 TTCTGAAAGGCAAGCTGGTGGTGGCCATGACCTGAAGCAGCACTTCAATGCCCTGAAGGAGGATATGAGCAAGTACACCATCTATGACACGTCCACAGA  
80▶ L L K G K L V V G H D L K H D F N A L K E D M S K Y T I Y D T S T D

ScaI (929) Bsu36I (948)  
901 CAGGCTGTGTGGCATGAGGCCAAGCTGCAGTACTACAGCCGAGTGTCCCTGAGGCTGTGTGTAAGCGCTGTACACAAGAACATCCAGAACAAGTGG  
113▶ R L L W H E A K L Q Y Y S R V S L R L L C K R L L H K N I Q N N W

XcmI (1025)  
1001 CGGGGCCACTGCTCTGTGGAAGATGCCAGGGCCACAATGGAGCTTACAAAATCTCTCAGCGACTCAGAGCCCAGCGAGGGCTGCCTTGCCTGGGACGT  
147▶ R G H C S V E D A R A T M E L Y K I S Q R L R A Q R G L P C P G T

MscI (1139)  
NheI (1133)  
1101 CAGACTGAACTTCATCCTCATCCAGGTTAGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGAATGCAGTGAA  
180▶ S D •

HpaI (1271) MfeI (1282)  
1201 AAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAACAAATTGCATTCATTTTAT

EcoRI (1367)  
1301 GTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAAC  
1401 CTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACC

SapI (1549)  
1501 TTCTTTCATGGAGTTAAGATATAGTGATTTTCCAAGGTTTGAAGTACTCTTCATTTCTTTATGTTTAAATGCACTGACCTCCACATTCCTTTT

SspI (1606) SmaI (1620) EcoO109I (1681)  
1601 TAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCC  
1701 CCAGTTTAGTGTGGACTTAGGGAACAAGAACCTTTAATAGAAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGTTACTTGAGGGG  
141▶ • N R T Y K L P  
1801 GATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCA  
133▶ 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 R C M G

BstXI (1910)  
1901 CAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAG  
99▶ 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 N S V A S

StuI (2045)  
2001 ACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCG  
66▶ 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 R I A A

BbsI (2191)  
XmnI (2187)  
2101 CCCGACATGGTCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATG  
33▶ 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 F T K M

AseI (2253)  
2201 GTGGCCCTCTATAGTGTGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGG  
2301 TTCACTAACGAGCTCTGCTTATATAGACTCCACCCTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCC

SpeI (2408)  
2401 GTTGATTTACTAGTCAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTG

SnaBI (2536)  
2501 CCAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTGGCAAGTAGGAAAGTCCCATAAGGTCTGTAAGTGGCATAATGCCAGGGC

2601 GGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATT  
2701 GACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATT

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2801 TACCGTAAGTTATGTAACGCTGCAGGTTAATTAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTT  
2901 TCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCC  
3001 TGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGCTCA

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3101 CGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCAGCCGCTGCGCCTTATCCGGTAACT  
3201 ATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGA  
3301 GTTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGC  
3401 TCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGA

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3501 TCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAA  
3601 ATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAA  
3701 AATAGGCTGTCCCAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA