



PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCCCTACCTGAGATCACCGGTACCATTGCGGATCCTCGTGCCCGCGCCTCTAGCGGCTCT
1▶ M A I L V R P R L L A A L

SacII (638)
BstEII (633) **EcoRV (681)**
601 CGCGCCACGTTTCTCGGCTGCCTCCTCCTCCAGGTGACCGCGGTGCAGGCATTCCAGAGAAAGCGTTTAATTTAACTTGGATATCAACTGATTTCAAG
13▶ A P T F L G C L L L Q V T A G A G I P E K A F N L T W I S T D F K

XbaI (763)
BsrGI (744) **ClaI (758)**
701 ACAATTTTGAGTGGCAACCCAAACCCACCAACTATACCTACACTGTACAGATAAGTGATCGATCTAGAACTGGAAAAACAAGTGTCTCGACCACAG
47▶ T I L E W Q P K P T N Y T Y T V Q I S D R S R N W K N K C F S T T

DraIII (801) **EcoO109I (860)**
801 ACACCGAGTGCACCTCACAGACGAGATCGTGAAGGATGTGACCTGGGCTATGAAGCAAAGGTCCTCTGTCCCACGGAGAACTCAGTTCATGGAGA
80▶ D T E C D L T D E I V K D V T W A Y E A K V L S V P R R N S V H G D
901 CGGAGACCAACTTGTGATTCATGGGAGAGGCCCATTTACAACCGCCCAAAGTTTTTACCTTACCAGACACAAACCTTGGACAGCCAGTAATTCAG
113▶ G D Q L V I H G E E P P F T N A P K F L P Y R D T N L G Q P V I Q
1001 CAGTTTGAACAAGATGGTAGAAAAGTGAACGTGGTTGTAAAAGACTCACTTACATTAGTCAGAAAAGATGGTACATTCCTCACCTGCGGCAAGTCTTTG
147▶ Q F E Q D G R K L N V V V K D S L T L V R K N G T F L T R Q V F

EcoRI (1177)
1101 GCAAGGACTTGGGTATATAATTAATTAATCTATCGGAAAGGCTCAAGCACGGGAAAGAAAACAACATTACAAAACCAATGAATTCCTGATTGATGTGAAGA
180▶ G K D L G Y I I T Y R K G S S T G K K T N I T N T N E F S I D V E E

BsrGI (1221) **ApaI (1281)** **XmnI (1296)**
1201 AGGAGTAAGCTACTGCTTTTTGTACAAGCTATGATTTTCTCCAGGAAAATAACCAAATAGCCAGGAAGCAGTACAGTGTGCACCGAGCAATGGAAG
213▶ G V S Y C F F V Q A M I F S R K T N Q N S P G S S T V C T E Q W K

MscI (1346)
1301 AGTTTCTGGGAGAAACACTCATCATTGTGGGAGCAGTGGTGTCTCGCCACCATCTTTATCATCCTCTGTCCATATCTCTGTGCAAGCGCAGAAAGA
247▶ S F L G E T L I I V G A V V L L A T I F I I L L S I S L C K R R K

MscI (1474)
BsrBI (1403) **NheI (1468)**
1401 ACCGAGCGGGACAGAAAGGAAGAACCCCGTCGCGCTTGGCATAGAGGAAAGGCTGAAGCCGCTAAGCTAGCTGGCCAGACATGATAAGATACATTGA
280▶ N R A G Q K G K N T P S R L A •

1501 TGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAAT

HpaI (1606) **MfeI (1617)**
1601 AAACAAGTTAAACAACAACATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTA

EcoRI (1702)
1701 TGGAAATCTAAAATACAGCATAGCAAACTTTAACCTCCTCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCT
▶ ◀

SapI (1884)
1801 GTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTCTTTTCATGAGGTTAAGATATAGTGATTTTTCCAAGGTTTGAAGTACTCTTCAATTTCTTTA

SspI (1941) **SwaI (1955)**
1901 TGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAAATATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGC

EcoO109I (2016)
2001 AGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAAATTGGACAGCAAGAAAGCG

SacI (2216) **BstXI (2245)**
2101 AGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTATCTCAATGAGCACAAGCAGTCAG
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 F C D P
2201 GAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAAT
111▶ 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 V A V I

StuI (2380)
2301 GGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCCTCAATGTGGACAGCA
78▶ 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 H V A
2401 GAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCGCT
44▶ 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 E V L E

2501 CCAGATCCTGCTGAGAGATGTTGAAGGCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAA
11 L D Q Q S I N F T K M

2601 AACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCTACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAA

2701 TGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGT

2801 GAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCAAAGTAGGAAAGT

2901 CCCATAAGGTCATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCAAAGTAGGAAAGT

3001 CAAGTGGGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTATTATTGACGTCAATGGG

3101 CGGGGGTCTGGGGCGTCCAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCTGCGAGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGC

3201 CAGGAACCGTAAAAAGGCCGCTTGTGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGGAAAC

3301 CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTC

3401 TCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC

3501 CGTTCAGCCCGACCGCTGCGCCTTATCCGGTAAGTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG

3601 ATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGC

3701 TGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTAC

3801 GCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGGATTTTGGTCATGGCT

3901 AGTTAATTAACATTTAAATCAGCGGCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCT

4001 CCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA