



PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGCGATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGTCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)**
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGGTACCATTGGAGTGGCCGGCGGCTCTGCGGGCTGTGGCGCT
1▶ M E W P A R L C G L W A L

SgrAI (609)
601 GCTGCTCTGCGCGCGCGGGGCGGGGCGGGGCGCGCCCTACGAACTCAGCCACCTGTGACAAATTTGAGTGTCTCTGTTGAAAACCTCTGC
13▶ L L C A G G G G G G G A A P T E T Q P P V T N L S V S V E N L C

BspEI (798)
701 ACAGTAATATGGACATGGAATCCACCCGAGGAGCCAGCTCAAATTGTAGTCTATGGTATTTTAGTCATTTTGGCACAACAAGATAAGAAAATAGCTC
47▶ T V I W T W N P P E G A S S N C S L W Y F S H F G D K Q D K K I A

SmaI (856)
EcoO109I (856)
801 CGAAACTCGTCGTTCAATAGAAGTACCCTGAATGAGAGGATTTGTCTGCAAGTGGGTCCCAGTGTAGCACCATGAGAGTGAAGCCTAGCATT
80▶ P E T R R S I E V P L N E R I C L Q V G S Q C S T N E S E K P S I L
901 GGTGAAAAATGCATCTACCCCGAAGGTGATCCTGAGTCTGCTGTGACTGAGCTTCAATGCATTTGGCACAACCTGAGCTACATGAAGTGTCTTGG
113▶ V E K C I S P P E G D P E S A V T E L Q C I W H N L S Y M K C S W

XmnI (1063)
1001 CTCCTGGAAGGAATACCAGTCCCGACACTAATACTCTACTATTGGCAGAGGCTGGAAAAATTCATCAATGTGAAAACATCTTTAGAGAAG
147▶ L P G R N T S P D T N Y T L Y Y W H R S L E K I H Q C E N I F R E

BstXI (1101)
1101 GCCAATACTTTGGTTGTTCTTTGATCTGACCAAGTGAAGGATTCCAGTTTTGAACAACACAGTGTCCAATAATGGTCAAGGATAATGCAGGAAAAAT
180▶ G Q Y F G C S F D L T K V K D S S F E Q H S V Q I M V K D N A G K I
1201 TAAACCATCCTTCAATATAGTGCCTTTAACTCCCGTGTGAAACCTGACTCCTCCACATATAAAACCTCCTTCCACAATGATGACCTATATGTGCAA
213▶ K P S F N I V P L T S R V K P D P P H I K N L S F H N D D L Y V Q
1301 TGGGAGAATCCACAGAATTTTATTAGCAGATGCCTATTTTGAAGTAGAAGTCAATAACAGCCAACTGAGACACATAATGTTTCTACGTCCAAGAGG
247▶ W E N P Q N F I S R C L F Y E V E V N N S Q T E T H N V F Y V Q E
1401 CTAATGTGAGAATCCAGAATTTGAGAGAAATGTGAGAATACATCTTGTTCATGGTCCCTGGTGTCTTCTGATACTTTGAACACAGTCAGAATAAG
280▶ A K C E N P E F E R N V E N T S C F M V P G V L P D T L N T V R I R
1501 AGTCAAAACAAATAAGTTATGCTATGAGGATGACAACTCTGGAGTAATTGGAGCCAGAAATGAGTATAGGTAAGAAGCGCAATTCACACTCTACATA
313▶ V K T N K L C Y E D D K L W S N W S Q E M S I G K K R N S T L Y I

ScaI (1644)
1601 ACCATGTTACTCATTGTTCCAGTCATCGTCGAGGTGCAATCATAGTACTCTGCTTACCTAAAAAGGCTCAAGATTATTATATTCCCTCCAATTCTG
347▶ T M L L I V P V I V A G A I I V L L L Y L K R L K I I I F P P I P
1701 ATCCTGGCAAGATTTTTAAAGAAATGTTTGGAGACCAGAATGATGACTCTGCACTGGAAGAAGTACGACATCTATGAGAAGCAAACTAAGGAGGAAAC
380▶ D P G K I F K E M F G D Q N D D T L H W K K Y D I Y E K Q T K E E T

MscI (1856)
NheI (1850)
1801 CGACTCTGTAGTCTGATAGAAAACCTGAAGAAAGCCTCTCAGTGTGGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCAC
413▶ D S V V L I E N L K K A S Q •

HpaI (1988) **MfeI (1999)**
1901 AACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAAC

EcoRI (2084)
2001 AATTGCATTCATTTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAG
2101 CATAGCAAACCTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAG

SapI (2266)
2201 CTGTTTGCAGCCTCACCTCTTTCATGGAGTTAAGATATAGTGTATTTCCCAAGGTTTGAAGTACTCTTCATTCTTTATGTTTTAAATGCACTGAC

SspI (2323) **Swal (2337)** **EcoO109I**
2301 CCCCCATTCCCTTTTTAGTAAATATTGAGAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAG
2401 GCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTC
141 • N

2501 CTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGA
138 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 A Y D S I L

BstXI (2627)

2601 GCTCTCTGCACATGCCACAGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTG
105 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 T D F D K Q

StuI (2762)

2701 CCCGTTGCTCACAGCAGACCCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTC
72 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 S I I E G T

2801 TTGGTCTGATGGCCGCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGA
38 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 L D Q Q S I

BbsI (2908)

XmnI (2904)

AseI (2970)

2901 TGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCTGGATGGCGTC
5 N F T K M

SacI (3027)

3001 TCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACG

SpeI (3125)

3101 ACATTTTGAAAGTCCCCTTGATTTACTAGTCAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCA

SnaBI (3253)

3201 CGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACT

NdeI (3358)

3301 GGGCATAATGCCAGGCGGGCATTACCCTGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCG

3401 TAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGAAACATACGTCAATTATTGACGTCAATGGGCGGGGGTCTTGGCGGT

PacI (3544)

PstI (3537)

SdaI (3536)

BspLU11I (3554)

3501 CAGCCAGGCGGGCATTACCCTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGAAAAGGCCAGGAACCGTAAAAAGGC

3601 CGCGTTGCTGGCGTTTTCCATAGGCTCCGCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA

3701 TACCAGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGG

ApaLI (3868)

3801 CGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTG

3901 CGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTAT

4001 GTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCG

4101 GAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGTGGTAGCGGTGTTTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATC

PacI (4284) SwaI (4293)

4201 TCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAA

EagI (4304)

NotI (4303)

4301 TCAGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAA

4401 ACAAACAAACTAGCAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA