



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

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)**
501 TCTGTTTGTGCGCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCATCATGACTGCAAAGATGAAACGACCTTCTATGACGATGC
13▶ M T A K M E T T F Y D D A

BsrBI (627)
601 CCTCAACGCTCTGTTCTCCCGTCCGAGAGCGGACCTTATGGTACAGTAACCCCAAGATCCTGAAACAGAGCATGACCTGAACCTGGCCGACCCAGTG
13▶ L N A S F L P S E S G P Y G Y S N P K I L K Q S M T L N L A D P V
701 GGGAGCCTGAAGCCGACCTCCGCGCAAGAAGCTCGGACCTCCTCACCTCGCCGACGTGGGGCTGCTCAAGCTGGCGTCCGCCGAGCTGGAGCGCCTGA
47▶ G S L K P H L R A K N S D L L T S P D V G G L L K L A S P E L L E R L
801 TAATCCAGTCCAGCAACGGGACACATCACCAACCGCCGACCCACCTTCTGTGCCCAAGAAGTACAGATGAGCAGGAGGGCTTCGCCGAGGG
80▶ I I Q S S N G H I T T T P T P T Q F L C P K N V T D E Q E G F A E G

BssHII (906) **SacII (995)**
901 CTTCTGCGCGCCCTGGCCGAAGTGCACAGCCAGAACACGCTGCCAGCGTACGCTCGGGCGCAGCCGGTCAACGGGGCAGGCATGGTGGCTCCCGCG
113▶ F V R A L A E L H S Q N T L P S V T S A A Q P V N G A G M V A P A

BssHII (1097)
1001 GTAGCCTCGTGGCAGGGGGCAGCGGCAGCGGGCTTACGCGCCAGCCTGCACAGCGAGCCGCCGGTCTACGCAAACCTCAGCAACTCAACCCAGGCG
147▶ V A S V A G G S G S G G F S A S L H S E P P V Y A N L S N F N P G

NgoMIV (1138)
NaeI (1138)
SfiI (1137)
EagI (1136)
1101 CGCTGAGCAGCGGGCGGCCCTCCTACGGCGCGCCGGCTGGCCTTTCCCGCGCAACCCAGCAGCAGCAGCGCCGCCGACCCACTGCCCA
180▶ A L S S G G G A P S Y G A A G L A F P A Q P Q Q Q P P H H L P Q

PstI (1225)
SacII (1219) **EcoO109I (1229)** **BstXI (1292)**
1201 GCAGATGCCCGTGCAGCACCCGCGGCTGCAGGCCCTGAAGGAGGAGCCTCAGACAGTGCCTCGAGATGCCCGGCGAGACACCGCCCTGTCCCCATCGAC
213▶ Q M P V Q H P R L Q A L K E E P Q T V P E M P G E T P P L S P I D

BsrBI (1312)
1301 ATGGAGTCCAGGAGCGGATCAAGGCGGAGAGGAGCGCATGAGGAACCCATCGCTGCCTCAAGTGCAGAAAAGGAGCTGGAGAGAATGCCCGCG
247▶ M E S Q E R I K A E R K R M R N R I A A S K C R K R K L E R I A R

BspHI (1496)
1401 TGGAGGAAAAAGTAAAACTTGAAGCTCAGAAGCTCGGAGCTGGCGTCCACGGCCAACATGCTCAGGAAACAGGTGGCACAGCTTAAACAGAAAGTCAT
280▶ L E E K V K T L K A Q N S E L A S T A N M L R E Q V A Q L K Q K V M

HpaI (1507) **MscI (1580)**
XcmI (1503) **NheI (1574)**
1501 GAACACGTTAAACAGTGGGTGCCAACTCATGCTAACGCAGCAGTTGCAAACTTTGAAGAGAGACCGTCGGGGGCTAGCTGGCCAGACATGATAAGATA
313▶ N H V N S G C Q L M L T Q Q L Q T F •

1601 CATTGATGAGTTTGGACAAACCACAAGTGAATGCAAGTGAATAAATGCTTTATTTGTAATAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGC

HpaI (1712) **MfeI (1723)**
1701 TGCAATAAACAAGTTAAACAACAATTGCATTCACTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAAT

EcoRI (1808)
1801 GTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCA
1901 GGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTTTCATT

SspI (2047) **SwaI (2061)**
2001 TCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTA

EcoO109I (2122)
2101 TTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAG
2201 AAAGCAGGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTTGCCATTCTCAATGAGCACAAAGC
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

SacI (2322) **BstXI (2351)**
2301 AGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGC
113▶ 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 V A

StuI (2486)

2401 CACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGG
80 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 H
2501 ACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCGACATGGTGTCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCA
46 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 E V

BspHI (2636)

BbsI (2632)

XmnI (2628)

AseI (2694)

2601 CCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAAT
13 L E L D Q Q S I N F T K M

SacI (2751)

2701 TGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGT

SpeI (2849)

2801 CGTCAATGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAAA

SnaBI (2977)

2900 TCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTA

NdeI (3082)

3000 GGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGAT

3100 GTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGT

PstI (3261)

SdaI (3260) PacI (3268)

BspLU11I (3278)

3200 CAATGGGCGGGGCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCA

3298 GCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGG

3398 TGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGT

ApaLI (3592)

3498 CCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCA

3598 CGAACCCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACT

3698 GGTAAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCT

3798 GCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCA

3898 GCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTG

EagI (4028)

PacI (4008)

SwaI (4017)

NotI (4027)

3998 GTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGGTTTTTTTGTGTAATCGTAACTAAC

4098 ATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGACAGGTGCCAGAACATTTCTCTATCGAA