



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

Psp1406I (203) **HindIII (245)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

KasI (535) **SphI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAGCATGCATTTGTCATTGCTGGTCCCCTTTCTCTTCTGGAT
1▶ M H L S L L V P F L F W I

BamHI (621) **BsrBI (648)** **Bsu36I (692)**
601 CACAGGCTGCTGCACGGCTGAGGATCCAGTCCAGGTCACAGGTCACAGGAGGTCAGGAGCAGGCTCCTTGACAGTGCAGTCCGATATACCTCAGGC
13▶ T G C C T A E D P V T G P E E V S G Q E Q G S L T V Q C R Y T S G

ScaI (716) **NsiI (770)** **PvuII (781)**
701 TGAAGGATTACAAGAAGTACTGGTGCCAAAGGAGTTCCTCAGAGATCATGTAAGACTCTTGTGAAACCGATGCATCAGAGCAGCTGGTGAAGAAGAACC
47▶ W K D Y K K Y W C Q G V P Q R S C K T L V E T D A S E Q L V K K N

NcoI (845)
801 GTGTGTCCATCAGGGACAACCAGAGAGACTTCATCTTCCAGTGCACATGGAGGATCTGAGGATGAGCGATGCTGGCATTACTGGTGTGGAATTACGAA
80▶ R V S I R D N Q R D F I F T V T M E D L R M S D A G I Y W C G I T K
901 AGGTGGACTTGATCCCATGTTTAAAGTACTGTGAACATTGGCCAGCAATCCAAGTACCCATTACAGTGCCAACCATGCCCCCATCACCTCCACCACC
113▶ G G L D P M F K V T V N I G P A I Q V P I T V P T M P P I T S T T
1001 ACCATCTTACAGTGACAACACAGTAAAAGAGACAGCATGTTTCCAACGCTGACTACTACTCTGATAACGGGCATGGCGGTGGTGACAGTGGCG
147▶ T I F T V T T T V K E T S M F P T L T S Y Y S D N G H G G G D S G
1101 GTGGTGAAGATGGCGTGGTGATGGGTTTCTGGATCTCAGTGTCTCCTCCAGTCATCTGCACTGCTGTTGCTTCTCTGTTGGTGGCCTCGCTCTT
180▶ G G E D G V G D G F L D L S V L L P V I S A V L L L L L L V A S L F
1201 TGCTTGGAGGATGGTGGAGACAGAAGAAAGCTGTGGGCCACCATCAGAGCAGGCACAGTCTGAGGGGTGATCTCTGTTATGCAGACCTGTCCCTG
213▶ A W R M V R R Q K K A A G P P S E Q A Q S L E G D L C Y A D L S L

NcoI (1394)
1301 AAGCAGCCGAGAACCTCCCTGGCTCCTTGGAAAAAGGGCTCCTCCATGTCCTCCTTGGCAGGACCACCAAGAGGAAGTGAATATGTCACCATGG
247▶ K Q P R T S P G S S W K K G S S M S S S G K D H Q E E V E Y V T M

NdeI (1424) **NgoMIV (1444)**
1401 CTCCCTTTCCAGGAGGAGGTTTCATATGCCGCTGACTTTGGCCGCTTGGGTGAGGAGCCTACTTATGGCAACTGGCTGCCCATCACCCACGT
280▶ A P F P R E E V S Y A A L T L A G L G Q E P T Y G N T G C P I T H V

StuI (1509) **EcoO109I (1549)** **NheI (1591)** **MscI (1597)**
1501 TCCAGGACAGGCCTTGAAGAGGAGACCACAGAGTACAGCAGCATCAGGAGGCCCTTGCCTGCAGCCATGCCTTAATCTTGGTCTCTGAAGGCTAGCTGG
313▶ P R T G L E E E T T E Y S S I R R P L P A A M P •
1601 CCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTAT

HpaI (1729) **MfeI (1740)**
1701 TTGTAACCATTATAAGCTGCAATAACAAGTTAACAACAACAAATTCATTCTTTTATGTTTCAGGTTGAGGGGAGGTGTTGGAGGTTTTTAAAGCAA

EcoRI (1825)
1801 GTAAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGA
1901 ATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGATTTTCCCAAGGTT

SapI (2007) **SspI (2064)** **Swal (2078)**
2001 TGAAGTCTCTTCTTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTATGATAAATATTCAGAAATAATTTAAATACATCATTGCAATG

EcoO109I (2139)
2101 AAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGAAGTGGGAAACAAAGAACCTTTAAT

2201 AGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTTCTCAATGGTGGTTTTGACCAGCTTGCATTTCAT
141▶ • N R T Y K L P I L E E I T T K V L K G N M

SacI (2339) **BstXI (2368)**
2301 CTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAG
119▶ E I L V F C 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
2401 TAGGGGTGCTGACAGCCACAATGGTGTCAAAGCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAA
85▶ Y P H R V A 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

StuI (2503)
2501 TGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGCTCATAGAGCATGGTATCTT
52▶ Y A E I H 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

BbsI (2649)
XmnI (2645)

2601 CTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATA
19 E T A V E V L E L D Q Q S I N F T K M

AseI (2711) SacI (2768)

2701 CTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAAACGAGCTCTGCTTATATAGACCTCCCACCGTACA

SpeI (2866)

2801 CGCCTACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGG

SnaBI (2994)

2901 GGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTA

NdeI (3099)

3001 GATGTACTGCCAAGTAGGAAAAGTCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGC

3101 ATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACAT

PacI (3285) SdaI (3277) BspLU11I (3295)

3201 ACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCTGCAGGTTAATTAGAACATG
CGCTGCAGGTTAATTAGAACATG

3301 TGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGCGGTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGAC

3401 GCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCGCTCCTGTTCCGACCCTGCCGCT

3501 TACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAG

ApaLI (3609)

3601 CTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGCTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCAC

3701 TGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAC

3801 AGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTT

3901 TTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACTCAC

EagI (4045)
PacI (4025) SwaI (4034) NotI (4044)

4001 GTTAAGGGATTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGTTTTTTGTGT

4101 GAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAAGTGCCAGGTGCCAGAACATTC

4201 TCTATCGAA