



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTCGCCGCTCCCGCTGTGGTGCCTCTGAACTGCGTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTGGCTGACCCTGTTGCTCAACTCTACGCTTTTGTTCGTTT

KasI (535)
AgeI (552)
BspLU11I (560)

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAACATGTGGCCCTTGGCGGCGGCTGTTGCTGGGCTCCTG

601 CTGCTGCGGTTACAGTCAACTACTGTTTAGTAACGTCACTCCATAGAGTTCACCTTCAATGAACTGTGGTTCATCCCTGTCATCGTCCGTAATGTG

13▶ C C G S A Q L L F S N V N S I E F T S C N E T V V I P C I V R N V

701 GAGGCGCAAAGCACCAAGAAATGTTTGTGAAGTGAAGTTGAACAAATCGTATATTTTCATCTATGATGAAAATAAAAAATAGCACTACTACAGATCAA

47▶ E A Q S T E E M F V K W K L N K S Y I F I Y D G N K N S T T T D Q

NcoI (875)

801 ACTTTACCAGTGCAAAAATCTCAGTCTCAGACTTAATCAATGGCATTGCCTCTTTGAAAATGGATAAGCGCGATGCCATGGTGGGAAACTACACTTGCGA

80▶ N F T S A K I S V S D L I N G I A S L K M D K R D A M V G N Y T C E

901 AGTGACAGAGTTATCCAGAGAAGGCAAAACAGTTATAGAGCTGAAAAACCGCACGGTTCGTTGGTTTTCTCAAATGAAAAGATCCTCATTGTTATTTTC

113▶ V T E L S R E G K T V I E L K N R T V S W F S P N E K I L I V I F

1001 CCAATTTGGCTATACTCCTGTTCTGGGAAAAGTTGGTATTTAACACTCAAATATAAATCCAGCCATACGAATAAGAGAATCATTCTGCTGCTCGTTG

147▶ P I L A I L L F W G K F G I L T L K Y K S S H T N K R I I L L L V

1101 CCGGCTGGTGTACAGTCAAGTCACTGTTGTTGGAGCCATCCTTCTCAGGAGAAAAGCCCGTGAAGAATGCTTGGACTTGGCCTCATTGTAAT

180▶ A G L V L T V I V V V G A I L L I P G E K P V K N A S G L G L I V I

AseI (1212)

1201 CTCTACGGGGATATAAATACTACTTCACTAACAATGTGTTTATGACAGCTTTTGGAAATGACCTCTTTCACCATTGCCATATTGATCACTCAAGTCTGGGC

213▶ S T G I L I L L Q Y N V F M T A F G M T S F T I A I L I T Q V L G

ApaI (1351)

1301 TACGTCCTTGTCTTGGTGGGCTGTGTCTCTGCATCATGGCATGTGAGCCAGTGCACGGCCCCCTTTGATTCAGGTTTGGGGATCATAGCTCTAGCAG

247▶ Y V L A L V G L C L C I M A C E P V H G P L L I S G L G I I A L A

HpaI (1626)
MfeI (1637)
AvrII (1459) **NheI (1488)** **MscI (1494)**

1401 AACTACTTGGATTAGTTTATATGAAGTTTGTGCTTCCAACAGAGGACTATCCAACCTCCTAGGAATAGGTGAAGGGAAGTACGGAGCTAGCTGGCCA

280▶ E L L G L V Y M K F V A S N Q R T I Q P P R N R •

1501 GACATGATAAGATACATTGATGAGTTTGGACAAACCACAACACTAGAATGCAGTGAATAAATGCTTTATTTGTGAATTTGTGATGCTATTGCTTTATTTG

EcoRI (1722)

1701 AAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATA

1801 AGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTATTTCCTCAAGTTTGA

SapI (1904)
SspI (1961)
Swal (1975)

1901 ACTAGCTCTTCATTTCTTTATGTTTAAATGCACTGACCTCCACATTCCTTTTATGTAATAATTCAGAAAATAATTTAAATACATCATTGCAATGAAA

EcoO109I (2036)

2001 ATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTATGATGTTGACTTAGGGAACAAAGGAACCTTTAATAGA

2101 AATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCATCTC

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

SacI (2236) **BstXI (2265)**

2201 AATGAGCACAAAGCAGTCAGGAGCATAGTGCAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAG

118▶ 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 Y

2301 GGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTGCACCTGCCAATGT

84▶ 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 Y

StuI (2400)

2401 AGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCGACATGGTGCTTGTGCTCATAGAGCATGGTATCTTCTC

51▶ 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 E

BbsI (2546) **XmnI (2542)**

2501 AGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTA

18▶ T A V E V L E L D Q Q S I N F T K M

AseI (2608) **SacI (2665)**

2601 TGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCTACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGC

2701 CTACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGT
SpeI (2763)
←

2801 GGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGAT
SnaBI (2891)

2901 GTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATA
NdeI (2996)

3001 TGATACACTTGATGTAAGTCCCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACG

3101 TCATTATTGACGTCAATGGGGCGGGGTCGTTGGGCGGTGACCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAAGAACATGTGA
PstI (3175)
SdaI (3174)
PacI (3182)
BspLU11I (3192)
←

3201 GCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCT

3301 CAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTAC

3401 CGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTTCGCTCCAAGCTG

3501 GGCTGTGTGCACGAACCCCGTTGAGCCGACCGCTGCGCTTATCCGTAAGTATCGTCTTGAAGTCCAAACCCGTAAGACACGACTTATCGCCACTGG
ApaLI (3506)

3601 CAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGT

3701 ATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGTTTTTTT

3801 GTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTT

3901 AAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAA
PacI (3922) SwaI (3931) EagI (3942) NotI (3941)

4001 TCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCT

4101 ATCGAA