



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) **Bsu36I (291)**
PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCCGCTTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGTCACCATGGCCCGGCCACGCTCTCCGCCGCCCCAGCAATCC

BstEII (555)
AgeI (552) NcoI (560)
1 ▶ M A R A T L S A A P S N P

601 CCGGCTCCTGCGGGTGGCGTCTGCTCCTGCTCCTGGTGGCCGCCAGCCGGCGCGCAGCAGGAGCGCCCTGGCCACTGAACTGCGTGGCAGTGCTTG

BssHII (651)
NcoI (647) MscI (671) **BstAPI (699)**

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

701 CAGACCTGCAGGGAATTCACCTCAAGAACATCAAAGTGTGAAGTGAAGTCCCGGACCCACTGCGCCAAACCGAAGTCATAGCCACACTCAAGA

PstI (706) SdaI (705) EcoRI (713)

47▶ Q T L Q G I H L K N I Q S V K V K S P G P H C A Q T E V I A T L K

801 ATGGGCAGAAAGCTTGTCTCAACCCGCATCGCCATGGTTAAGAAAATCATGAAAAGTGTGAAAATGGCAAATCCAAGTACCAGAAGGAAGGAG

HindIII (809) NcoI (833)

80▶ N G Q K A C L N P A S P M V K K I I E K M L K N G K S N •

901 GAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATG

1001 CTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAGTTAAACAACAACATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGT

1101 TTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTT

EcoRI (1137)

1201 TCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTAT

1301 TTTCCAAGTGTGAACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATAC

1401 ATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGACAAA

1501 GGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAG

EcoO109I (1451)
141 ◀ • N R T Y K L P I L E E I T T K V L

1601 CTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCC

SaeI (1651) **BstXI (1680)**

123◀ K G N M 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

1701 ACCTCATCAGAGTAGGGGTGCTGACAGCCCAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTTCAGCACAGACAG

89◀ V E D S 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

1801 TGACCCTGCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCAGCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGCTCATAGAG

StuI (1815)

56◀ V R G I 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

1901 CATGGTGTCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATAC

BbsI (1961)
XmnI (1957)

23◀ M T I K E T A V E V L E L D Q Q S I N F T K M ◀

2001 TATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAAACGAGCTCTGCTTATATAGACC

2101 TCCCACGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCAT

AseI (2023) SacI (2080) **SpeI (2178)**

2201 TGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGAT
SnaBI (2306)

2301 GACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGG
NdeI (2411)

2401 GGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTA
PstI (2590)
SdaI (2589)PacI (2597)

2501 CTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTA
BspLU11I (2607)

2601 AITAAAGACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATC
←

2701 ACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGTCCCTCGTGGCTCTCCTGTTC
2801 GACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGAAGCGTGGCGTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTC
ApaLI (2921)

2901 GTTCGCTCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCGTGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACAGC
3001 ACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTA
3101 CACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAACCCGCTGGT
3201 AGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTACGGGTCTGACGCTCAGTGGA
EagI (3357)
PacI (3337) SmaI (3346) NotI (3356)

3301 ACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGT
3401 GGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTG
3501 CCAGAACATTTCTCTATCGAA