



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

Psp1406I (203)
HindIII (245)
Bsu36I (291)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACCGCGCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCCGGCGCTCCCTTGAGAGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
KasI (535)
BstEII (555)
501 TCTGTTCTGGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTACCATTGGTCTCTTTGGCTCAGCTGCTCTGATCGCCCT
1▶ M V L L W L T L L L I A L

Bsu36I (648)
601 GCCCTGTCTCTGCAAACGAAGGAGATCCAAACCCACCAATCACGAACCTAAGGATGAAAGCAAAGGCTCAGCAGTTGACCTGGGACCTTAACAGAAT
13▶ P C L L Q T K E D P N P P I T N L R M K A K A Q Q L T W D L N R N
EcoRV (706)
701 GTGACCGATATCGAGTGTGTTAAAGACGCCGACTATTCTATGCCGCGAGTGAACAATAGCTATTGCCAGTTTGGAGCAATTTCTTATGTGAAGTGACCA
47▶ V T D I E C V K D A D Y S M P A V N N S Y C Q F G A I S L C E V T
BbrPI (834)
801 ACTACACCGTCCGAGTGGCCAACCCACCACTTCTCCACGTGGATCCTTCCCTGAGAACAGTGGGAAGCCTTGGGCAGGTGCGGAGAATCTGACCTGCTG
80▶ N Y T V R V A N P P F S T W I L F P E N S G K P W A G A E N L T C W

BspHI (903)
PvuII (927)
XmaI (942)
SacII (953)
Psp1406I (982)
901 GATTCATGACGTGGATTTCTTGAGCTGCAGCTGGGCGGTAGGCCCGGGGCCCCCGCGGACGTCCAGTACGACCTGTACTTGAACGTTGCCAA GCGTCAA
113▶ I H D V D F L S C S W A V G P G A P A D V Q Y D L Y L N V A K R Q
1001 CAGTACGAGTGTCTTCACTACAAAACGGATGCTCAGGGAACAGTATCGGGTGCCTTTCGATGACATCTCTGACTCTCCAGCGGTTCTCAAAGTTCCC
147▶ Q Y E C L H Y K T D A Q G T R I G C R F D D I S R L S S G S Q S S
1101 ACATCCTGGTGGGGGAGGAGCGCAGCCTTCCGTATCCCTGCACAGATAAGTTTGTGCTTTTTACAGATTGAGATATTAACCCACCCAACATGAC
180▶ H I L V R G R S A A F G I P C T D K F V V F S Q I E I L T P P N M T
1201 TGCAAAGTGAATAAGACACATTCTTTATGCACTGAAAAATGAGAAGTCATTTCATCGCAAATTTGCGTATGAGCTTACAGATACAAAAGAGAATGCAG
213▶ A K C N K T H S F M H W K M R S H F N R K F R Y E L Q I Q K R M Q
XmaI (1379)
EcoRI (1396)
1301 CCTGTAATCACAGAACAGGTGAGAGACAGAACCTCCTCCAGCTACTCAATCCTGGAACGTACACAGTACAAAATAAGAGCCCGGAAAGAGTGTATGAAT
247▶ P V I T E Q V R D R T S F Q L L N P G T Y T V Q I R A R E R V Y E

Eco47III (1424)
BbrPI (1460)
1401 TCTTGAGCGCTGGAGCACCCCCAGCGCTTCGAGTGGCAGCAGGAGGAGGGCGCAAACACACAGTGCCTGGCGGACGTGCTGCTGATCGCGTGGGGAC
280▶ F L S A W S T P Q R F E C D Q E E G A N T R A W R T S L L I A L G T
1501 GCTGCTGGCCTGGTCTGTGCTTCTGATCTGCAAGAAGTATCTGGTATGCAGAGACTTTTCCCGCATCCCTCACATGAAAGACCCATCGGTGAC
313▶ L L A L V C V F L I C R R Y L V M Q R L F P R I P H M K D P I G D
1601 AGTTCCAAAACGACAAGCTGGTGGTCTGGGAGCGGGCAAAGCCGGCTGGAGGAGTGTCTGGTGACTGAAGTACAGGTCGTGCAGAAAACCTTGAGACT
347▶ S F Q N D K L V V W E A G K A G L E E C L V T E V Q V V Q K T •

MseI (1715)
NheI (1709)
1701 GGGGTTACAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT

HpaI (1847)
MfeI (1858)
1801 GTGATGCTATTGCTTTATTTGTAACCATTATAAGTGAATAAACAAGTTAACAACAACAATTGCATTATTTATGTTTCAGGTTTCAGGGGAGGTGTG

EcoRI (1943)
1901 GGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAA
2001 TCCTTTTCTGAGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATA

SspI (2182)
SwaI (2196)
2101 GTGTATTTTCCAAAGGTTTGAACCTAGCTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTT
2201 AAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGTGGACTTAGGG
2301 AACAAAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTT
141▶ • N R T Y K L P I L E E I T T K

SacI (2457)
BstXI (2486)
2401 GACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTTGCACATGCCACAGGGGCTGACCACCTGATGGAT
125▶ V L 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
2501 CTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCCCGCTTGTCTCACAGCAGACCAATGGCAATGGCTTCAGCAC
91▶ R D 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

StuI (2621)
 2601 AGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTGTCCTC
 58 V T 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

XmnI (2763)
 2701 ATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTA
 25 Y L M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (2829) **SacI (2886)**
 2801 TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAAACGAGCTCTGCTTATA

SpeI (2984)
 2901 TAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAA
 3000 CTCCATTGACGTCATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAA

SnaBI (3112)
 3100 TAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTC

NdeI (3217)
 3200 AATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATT

SdaI (3395)
 3300 GCGGTTACTATGGGAACATACGTCATTATTGACGTCATGGGGGGGGTCTGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTG

PacI (3403) **BspLU11I (3413)**
 3400 C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G A A A A G G C C A G G A A C C G T A A A A A G G C C G G T T G C T G G C G T T T T T C C A T A G G C T C C G C C C C T G A
 3499 C G A G C A T C A A A A A T C G A C G C T C A A G T C A G A G G T G G C G A A C C C G A C A G G A C T A T A A G A T A C C A G G C G T T T C C C C T G G A A G C T C C C T C G T G C G C T C T
 3599 C C T G T T C C G A C C C T G C C G T T A C C G G A T A C C T G T C C G C T T T T C C C T T C G G G A A G C G T G G C G C T T T T C A T A G C T C A C G C T G T A G G T A T C T C A G T T C G G

ApaLI (3727)
 3699 TGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGTAACATATCGTCTTGTAGTCCAACCCGGT
 3799 AAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAAC
 3899 TACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA
 3999 CCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGC

EagI (4163)
PacI (4143) **SwaI (4152)** **NotI (4162)**
 4099 TCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCCAATAAAATATCTTTATTTTTCATTACATC

4199 TGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAG
 4299 TGCAGGTGCCAGAACATTCTCTATCGAA