



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82)
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
PvuII (239)
Bsu36I (291)
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTACCATTGGCTGCAGGAGTCCCGGCGCGGGTCTGCGGCCCC
1▶ M A A G G P G A G S A A P

EagI (692)
601 GGTCTCTCCACATCCTCCCTTCCCTGGCTGCTCTCAACATGCGAGTGGCGGCGCCCTGTCTCTGTTCTTGAACGTGCGGACACAGGTGGCGCGGAC
13▶ V S S T S S L P L A A L N M R V R R R L S L F L N V R T Q V A A D

ScaI (731)
701 TGGACCGCGTGGCGGAGGAGATGGACTTTGAGTACTTGGAGATCCGGCAACTGGAGACACAAGCGGACCCACTGGCAGGCTGCTGGACGCTGGCAGG
47▶ W T A L A E E M D F E Y L E I R Q L E T Q A D P T G R L L D A W Q

XhoI (829) 801 GACGCCCTGGCGCTCTGTAGGCCGACTGCTCGAGCTGTTACCAAGCTGGGCGCGACGACGTGCTGCTGGAGCTGGGACCCAGCATTGAGGAGGATTG
SmaI (876)
80▶ G R P G A S V G R L L E L L T K L G R D D V L L E L L G P S I E E D C
901 CCAAAAGTATATCTTGAAGCAGCAGCAGGAGGAGCTGAGAAGCCTTACAGGTGGCCCTGTAGACAGCAGTCCACGGACAGCAGAGCTGGCGGGC
113▶ Q K Y I L K Q Q E E A E K P L Q V A A V D S S V P R T A E L A G

NdeI (1027)
1001 ATCACCACACTTGATGACCCCTGGGGCATATGCTGAGCGTTTCGATGCCTTCATCTGCTATTGCCCCAGCGACATCCAGTTTGTGCAGGAGATGATCC
147▶ I T T L D D P L G H M P E R F D A F I C Y C P S D I Q F V Q E M I
1101 GGCAACTGGAACAGACAAAATATCGACTGAAAGTTGTGTGTCTGACCGCGATGCTCTGCTGGCACCTGTGTCTGGTCTATTGCTAGTGAGCTCATCGA
180▶ R Q L E Q T N Y R L K L C V S D R D V L P G T C V W S I A S E L I E
1201 AAAGAGGTGCGCGGATGTTGGTGGTGTCTGTGATGATTACCTGCAGAGCAAGGAATGTGACTTCCAGACCAATTTGCACTCAGCCTCTCCAGGT
213▶ K R C R R M V V V V S D D Y L Q S K E C D F Q T K F A L S L S P G

BsaBI (1317) 1301 GCCCATCAGAAGCGACTGATCCCATCAAGTACAGGCAATGAAGAAAGTTCCCGCAGCATCTGAGGTTTCACTACTGTCTGCGACTACACCAACCCCT
XmnI (1344) 247▶ A H Q K R L I P I K Y K A M K K E F P S I L R F I T V C D Y T N P
Bsu36I (1362)

StuI (1433) 1401 GCACCAAATCTTGGTTCTGGACTCGCCTTGCCAAAGCCTTGTCCCTGCCCTGAAGACTGTTCTGAGGCCCTGGGTGTGTGTATCTGTCTGCCTGTCCA
BbsI (1451)
280▶ C T K S W F W T R L A K A L S L P •

MscI (1515)
NheI (1509) 1501 TGTACTTCTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT

HpaI (1647) 1601 GTGATGCTATTGCTTTATTTGTAACCATTATAAGTGAATAAACAAGTTAACAACAACAAATGCATTATTTATGTTTCAGGTTTCAGGGGAGGTGTG
MfeI (1658)

EcoRI (1743)
1701 GGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATCTAAATAACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAA
1801 TCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATA

SapI (1925) 1901 GTGTATTTTCCCAAGTTTGAACAGTCTTCTTCTTTATGTTTTAAATGCACTGACCTCCACATCCCTTTTATGATAAATATTCAGAAATAATTT
SspI (1982) 2001 AAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTATGAGTTGGACTTAGGG
SwaI (1996)
2101 AACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTT
141▶ • N R T Y K L P I L E E I T T K

BstXI (2286)
2201 GACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGAT
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
2301 CTGTCCACTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCAC
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 (2421)
2401 AGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGTCCTC
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

BbsI (2567)
XmnI (2563) 2501 ATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCCTATAGTGAGTCGTA
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

2601 **AseI (2629)**
TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATA

2701 **SpeI (2784)**
TAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTA**CTAGTCAAAACAAC**

2801 **SnaBI (2912)**
TCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT

2901 **NdeI (3017)**
AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCA

3001 **SdaI (3195)**
ATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTG

3101 **PacI (3203) BspLU11I (3213)**
GCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACG**CGCTGC**

3201 **PacI (3203) BspLU11I (3213)**
AGGTTAAITTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACG

3301 **PacI (3203) BspLU11I (3213)**
AGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAAGCTCCCTCGTGCCTCTCC

3401 **PacI (3203) BspLU11I (3213)**
TGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTG

3501 **ApaLI (3527)**
TAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAA

3601 **ApaLI (3527)**
GACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTA

3701 **ApaLI (3527)**
CGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCC

3801 **ApaLI (3527)**
GCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC

3901 **PacI (3943) SwaI (3952) EagI (3963) NotI (3962)**
AGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTCATTACATCTG

4001 **PacI (3943) SwaI (3952) EagI (3963) NotI (3962)**
TGTGTTGGTTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTG

4101 **PacI (3943) SwaI (3952) EagI (3963) NotI (3962)**
CAGGTGCCAGAACATTTCTATCGAA