



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

MfeI (82)

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGCC

PvuII (239) Bsu36I (291)

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAATGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCAGCTTTGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) NcoI (560) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGCCTGGAGGTACTIONACAACCTGCTCTGGTCCCTGT

XmnI (658) 1 M A W R Y S Q L L L V P V
SapI (658)

PvuII (601) 601 GCAGCTGGTGTCTCGCCTCAGTTTGTGTCAGGTGTCTGGGGTCCACAGTATCTGAAGAGCTTCATAGAATGGTAGGACAGAGCCTCTCCGTGCAG

13 Q L V F L A S V C C P G V W G S T V S E E L H R M V G Q S L S V Q

Bsu36I (712)

701 TGCCAATACAAGCCTAAGGAGGAGTCTATGTGCTGAAAACGTGGTGTGCGGAAACAGCCCCAAGTAAATGTACGAGAGTGGTCACTACCTCTGAGCCTC

47 C Q Y K P K E E S Y V L K T W C R Q T A P S K C T R V V T T S E P

801 GGAAGCAGCCAGGGAATTACAGCACACAATCTGGGATGATCTGAAGCTGGCTTCTCAACATCACCATGACTCAACTAACAGAGGATGACTCAGCGTT

80 R K A A R E L Q H T I W D D P E A G F F N I T M T Q L T E D D S A F

901 CTACTGGTGTGGTCCATATTATCCTTCCCTCAGAGAAGTAACTGTTCTCAGAAACATCAGCCTGGTGGTGTGCCAGCCCCATCAACCTTCTTCGCAG

113 Y W C G P Y Y P S L R E V T V L R N I S L V V S P A P S T L P S Q

BsrBI (1009)

1001 ACGATTGCTCCGCTCCAGAAAGCACAGCCACCATCTTTATGCCCTTCCAGTCTGACTACCTCTCCGAGGAGACCACTGACTCTTCCATCAATGGCA

147 T I A P L P E S T A T I F M P F P V L T T S P E E T T D S S I N G

XmaI (1143) EcoO109I (1187)

1101 CTGGGCACAGAAACCAAAGTTCCTCCTCCTGGCTGGACCTCCCCGGGGCTTCTGGTCTCTGTGCAATATGGACTCCTCCTGCTCAAGGCCCTGATGCT

180 T G H R N Q S S S S P G W T S P G L L V S V Q Y G L L L L K A L M L

MscI (1233)

1201 GTCAGTTTTCTGTGTCTTTTCTGGAGGAGTGGCCAGGGACGAGAGTACATGGCAGAGACGATGGAGCTTCAAACCTACCTCACATCTCAAGTCC

213 S V F C V L L C W R S G Q G R E Y M A E T M E L S K L P H I S K S

MscI (1380)

NheI (1374)

1301 TTGGACACGGTTAGCCACATCTCAGGGTATGAGAAGAAGGCTAACTGGTACTAAGGCAGAACAGGCCAAACTTCGCTAGCTGGCCAGACATGATAAGATA

247 L D T V S H I S G Y E K K A N W Y •

1401 CATTGATGAGTTTGGACAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGC

HpaI (1512) MfeI (1523)

1501 TGCAATAAAACAAGTTAAACAACAACAATTGCATTCATTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAAT

EcoRI (1608)

1601 BTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCA

SapI (1790)

1701 GGGCTGTGCCAATGTGCATTAGCTGTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTAGCTCTTCATT

SspI (1847) SwaI (1861)

1801 TCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTA

EcoO109I (1922)

1901 TTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAG

2001 AAAGCGAGCTTCTAGCTTTAGTTCTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGC

141 N R T Y K L P I L E E I T T K V L K G N M E I L V F C

SacI (2122)

2101 AGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGC

113 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 P H R V A

StuI (2286)

2201 CACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGG

80 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 A E I H

2301 ACAGCAGAGATGATCTCCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGGTGCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCA
46 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 T A V E V

BbsI (2432)

2401 CCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAAT
13 L E L D Q Q S I N F T K M

XmnI (2428) AseI (2494)

2501 TGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTG

SaeI (2551)

2601 CGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAAT

SpeI (2649)

2701 CCCCGTGAGTCAAACCGCTATCCAGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAG

SnaBI (2777)

2801 GAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATG

NdeI (2882)

2901 TACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTATTATTGACGTC

PacI (3068)

3001 AATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAAITAAAGAACATGTGAGCAAAAGGCCAGCA

PstI (3061) SdaI (3060) BspLU11I (3078)

3101 AAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGG

3201 CGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCG

ApaLI (3392)

3301 CCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGA

3401 ACCCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGT

3501 AACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCG

3601 CTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCA

3701 GATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTC

EagI (3828)

3801 ATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATA

PacI (3808) SwaI (3817) NotI (3827)

3901 CGCTCTCCATCAAAAACAAAACGAAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA