



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82)
101 GAGAAGGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGTACTGGCTCCGCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGGC
PvuII (239)
301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
Bsu36I (291)

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGTCTTCTCAGGAGCCTTTCATCCTGCAAGTACT
NcoI (560) 1 M V L L R S L F I L Q V L
ScaI (594)
SpeI (597)

BspHI (678)
601 AGTACGGATGGGCTAACTTACAACCTTTCTAACTGCAACTTCACGTCAATTACGAAAATATATTGTAACATAATTTTCATGACCTGACTGGAGATTTG
13 V R M G L T Y N F S N C N F T S I T K I Y C N I I F H D L T G D L
701 AAAGGGCTAAGTTCGAGCAAATCGAGGACTGTGAGAGCAAGCAGCTGTCTCCTGAAAATCGAGTATTACTCTCAATCCTATCCCTGGCTGCCCTT
47 K G A K F E Q I E D C E S K P A C L K I E Y Y T L N P I P G C P
801 CACTCCCCGACAAAACATTTGCCCCGAGAACAAGAGAAGCCCTCAATGACCACTGCCAGGCTACCCTGAAACTGAGAGAAATGACGGTACTCAGAAAT
80 S L P D K T F A R R T R E A L N D H C P G Y P E T E R N D G T Q E M
901 GGCACAAGAGTCAAAAACATCTGTCTGAATCAAACCTCACAATTCTAAGATTGGTATTCTTTCATGCAATCTCCAGAATAAAAATTAGCTTTCAGCT
113 A Q E V Q N I C L N Q T S Q I L R L W Y S F M Q S P E •

MscI (1021)
NheI (1015) 1001 TCTGCTATGAAAATCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTG

HpaI (1153) 1101 AAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTCGATTCATTTTATGTTTCAGGTTTCAGGGGA
MfeI (1164)

EcoRI (1249)
1201 GGTGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAATAACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTA
1301 CTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTCTTTTCATGGAGTTAA

SapI (1431) 1401 GATATAGTGTATTTTCCAAGTTTGAAGTCTCTTCATTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCCTTTTAGTAAAATATTCAGAAA
SspI (1488)

Swal (1502) 1501 TAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGAC
EcoO109I (1563)
1601 TTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGT
141 • N R T Y K L P I L E E I T

SacI (1763) 1701 GGTTTTGACCAGCTTCCATTATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCGACATGCCACAGGGGCTGACCACCCTG
127 T K 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
1801 ATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTT
93 I S 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

StuI (1927) 1901 CAGCACAGACAGTGACCCTGCAATGTAGGCCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTT
60 A C 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

BbsI (2073) 2001 GTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGA
27 D E 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

XmnI (2069) 2101 GTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTG
AseI (2135) **SacI (2192)**

SpeI (2290) 2201 CTTATATAGACCTCCCACGTTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAA
AseI (2135)

2301 ACAAACCTCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCAT

SnaBI (2418)

2401 GGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTG

NdeI (2523)

2501 ACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCC

2601 CTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAA

PacI (2709)

PstI (2702)

SdaI (2701)

BspLU11I (2719)

2701 GCCTGCAGGTTAAATAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCC

2801 CTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCG

2901 CTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGT

ApaLI (3033)

3001 TCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACC

3101 CCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCC

3201 TAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAA

3301 ACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTG

EagI (3469)

PacI (3449) SwaI (3458) NotI (3468)

3401 ACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTA

3501 CATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTG

3601 CAAGTGCAGGTGCCAGAACATTTCTCTATCGAA