



PvuI (7)
SgfI (6) 1 GGATCTGGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA **MfeI (82)**

101 GAGAAGGTGGCGCGGGTAAACTGGGAAAGTGATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGGC **Bsu36I (291)**

301 GCCATCCACGCCGGTTGAGTGCAGTCTGCCGCCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) 501 TCTGTTTGTCCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGGGTACTTCCGGTGTGCAGGTGCTGGGTCTTTCGG **AgeI (552)**
1 M G Y F R C A G A G S F G

XmaI (632)
SrfI (631)
SacII (626) 601 CAGGAGGAGGAAGATGGAGCCCAGCACCGCGGGCCGGGCTTGGGCCCTTTTTGGTTGCTGCTGCCCTTGCTTGGCGCGGTTTGCGCCAGCGGACCCCGC **Bsp120I (641)**
13 R R R K M E P S T A A R A W A L F W L L L P L L G A V C A S G P R

BspEI (752)
701 ACCTTAGTGCTGCTGGACAACCTCAACGTGCGGGAGACTATTCGCTTTTCTCCGGAGCCTGAAGGACCGGGCTTTGAGCTCACATTAAGACCGCTG **BspEI (752)**
47 T L V L L D N L N V R E T H S L F F R S L K D R G F E L T F K T A

EcoRI (832)
801 ATGACCCAGCCTGTCTCTATAAAGTATGGGGAATTCCTCTATGACAATCTCATTTTTCTCCCTTCGGTAGAAGATTTGGAGGCAACATCAACGT **EcoRI (832)**
80 D D P S L S L I K Y G E F L Y D N L I I F S P S V E D F G G N I N V

BstEII (964)
901 GGAGACCATCAGTGCCTTTATTGACGGTGGAGGCAGTGTGCTGGTAGCTGCCAGCTCCGACATTTGGTACCCCTTTCCGAGAGCTGGGCAGTGAGTGGGG **BstEII (964)**
113 E T I S A F I D G G G S V L V A A S S D I G D P L R E L G S E C G

MscI (1062)
1001 ATTGAGTTTGACGAGGAGAAAACGGCTGTCATTGACCATCACAATATGACATCTCAGACCTTGCCAGCATAACGCTCATCGTGGCTGACACTGAGAACC **MscI (1062)**
147 I E F D E E K T A V I D H H N Y D I S D L G Q H T L I V A D T T E N
1101 TGCTGAAGGCCCAACCATCGTTGGGAAATCATCTCTAAATCCCATCTCTTTCCGAGGTGTTGGGATGGTGGCCGATCCTGATAACCCCTTTGGTGTGGA **MscI (1062)**
180 L L K A P T I V G K S S L N P I L F R G V G M V A D P D N P L V L D
1201 CATCCTGACGGGCTCTTCCACCTTACTCCTTCTCCCGGACAAGCCTATCACCCAGTATCCACATGCGGTGGGGAAGAACCCTCCTCATTGCTGGG **MscI (1062)**
213 I L T G S S T S Y S F F P D K P I T Q Y P H A V G K N T L L I A G

KasI (1389)
1301 CTCCAGGCCAGGAACAATGCCCGGTCATCTTACGCGCTCCCTCGACTTCTTACGAGCTCCTTCTCAACTCAGCAGTGCAGAAGCGCGCCCGCT **KasI (1389)**
247 L Q A R N N A R V I F S G S L D F F S D S F F N S A V Q K A A P G
1401 CCCAGAGGTATCCAGACAGGCAACTATGAAGTACTGTGGCCCTCTCCCGTGGGTGTTCAAGGAGGAGGGTGTCTCCGTGGGGCCTGTGTCCCA **KasI (1389)**
280 S Q R Y S Q T G N Y E L A V A L S R W V F K E E G V L R V G P V S H

SandI (1595)
1501 TCATCGGGTGGGCGAGACAGCCCAACCAATGCCTACACTGTCACTGACTAGTGGAGTATAGCATCGTGATCCAGCAGCTCTCAAATGGCAAATGGGTC **SandI (1595)**
313 H R V G E T A P P N A Y T V T D L V E Y S I V I Q Q L S N G K W V

PvuII (1621)
1601 CCCTTTGATGGCGATGACATTCAGCTGGAGTTTGTCCGATTGATCCTTTTGTGAGGACCTTCTGAAGAAGAAAGTGGCAAATACAGTGTTCAAGTTCA **PvuII (1621)**
347 P F D G D D I Q L E F V R I D P F V R T F L K K G G K Y S V Q F
1701 AGTTGCCGACGTGTATGGTGTATTCCAGTTTAAAGTGGATTACAACCGGCTAGGCTACACACCTGTACTCTCCACTCAGGTATCCGTGGGCCACT **PvuII (1621)**
380 K L P D V Y G V F Q F K V D Y N R L G Y T H L Y S S T Q V S V R P L

Eco47III (1817) 1801 CCAGCACACGAGTATGAGCGCTTCATCCCTCGGCCTACCCCTACTACGCCAGCGCCTTCTCCATGATGCTGGGGCTTTCATCTTCCAGCATCGTCTTC **Eco47III (1817)**
413 Q H T Q Y E R F I P S A Y P Y Y A S A F S M M L G L F I F S I V F

BstXI (1862) **BbsI (1894)**
MscI (1982)
1901 TTGCACATGAAGGAGAAGGAGAAGTCCGACTGAGGGGCTAGAGCCCTCTCCGACAGCGTGGAGACGGGGCAAGGAGCTAGCTGGCCAGACATGATAAGA **MscI (1982)**
447 L H M K E K E K S D •
2001 TACATTGATGAGTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAA

HpaI (2114) **MfeI (2125)**
2101 GCTGCAATAAACAAGTTAAACAACAATTGCATTCTATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAA

EcoRI (2210)
2201 ATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCAT

2301 CAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTTCA

SspI (2449) **Swal (2463)**
2401 TTTCTTTATGTTTTAAATGACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTT

2501 TATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCA
2601 AGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAA
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
BstXI (2753)
2701 GCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACA
114 C 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
StuI (2888)
2801 GCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGT
80 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 V R G I Y A E I H
2901 GGACAGCAGAGATGATCTCCCCAGTCTGGTCCCTGATGGCCGCCCGACATGGTGTCTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTC
47 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
BspHI (3038)
BbsI (3034)
XmnI (3030) AseI (3096)
3001 CACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTA
14 V L E L D Q Q S I N F T K M
3101 ATTGTCAAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCTACCGCCATT
SpeI (3251)
3201 TCGTCAATGGGGCGGAGTTGTTACGACATTTGGAAAGTCCCCTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAA
SnaBI (3379)
3301 ATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGT
NdeI (3484)
3401 AGGAAAGTCCATAAGGTGATGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGA
3501 TGTAAGTCCAAAGTGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACG
PacI (3670)
PstI (3663) SdaI (3662) BspLU11I (3680)
3601 TCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAAATAAGAACATGTGAGCAAAAGGCCAG
3701 CAAAAGGCCAGGAACCGTAAAAAGGCCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGT
3801 GCGGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGTCCCTCGTGGCTCTCTGTTCCGACCTGCCGTTACCGGATACCTGTC
ApaLI (3994)
3901 CGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGAC
4001 GAACCCCCGTTTACGCCCACCGCTGCGCTTATCCGGTAACTATCGTCTTGGTCCAAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTG
4101 GTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTG
4201 CGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAG
4301 CAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGG
EagI (4430)
PacI (4410) SwaI (4419) NotI (4429)
4401 TCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACCTAACAA
4501 TACGCTCTCCATCAAACAAAACGAAACAAAACAAAACCTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTCTCTATCGAA