



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

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGCTAGGTAAGTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT **NgoMIV (441)**

501 TCTGTTTGTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTGAGATGCTGTGCTGCTGTTCTGCTGCTTGGCACTGGG **KasI (535)** **AgeI (552)** **SphI (560)**
1 M P V S W F L L S L A L G

601 CCGAAACCTGTGGTCTCTCTGGAGAGACTGATGGAGCCTCAGGACACTGCACGCTGCTCTTAGGCCTCTCTGCCACCTCTGGGATGGTGCAGTG **Bsu36I (640)** **XcmI (678)**
13 R N P V V V S L E R L M E P Q D T A R C S L G L S C H L W D G D V

701 CTCTGCCTGCCTGGAAGCCTCCAGTCTGCCCCAGGCCCTGTGCTAGTGCCTACCCGCTGCAGACGGAGCTGGTGTGAGGTGCCACAGAAGACAGATT **BbsI (789)**
47 L C L P G S L Q S A P G P V L V P T R L Q T E L V L R C P Q K T D

801 GCGCCCTCTGTGTCGGTGTGGTCCACTTGGCCGTGAGTGGGACACTGGGACAGCCTGAAGAAGCTGGAAAGTCTGATTCAGAAGTCCAGGAGTCTAG **BglIII (1064)** **Acc65I (1088)**
80 C A L C V R V V V H L A V H G H W A E P E E A G K S D S E L Q E S R
901 GAACGCTCTCTCAGGCCAGGTGGTGTCTCTTCCAGGCCTACCCCATCGCCCGCTGTGCCTGCTGGAGGTCCAGGTGCCCGCTGACCTGGTGCAG
113 N A S L Q A Q V V L S F Q A Y P I A R C A L L E V Q V P A D L V Q

1001 CCTGGTCAGTCCGTGGTCTGCGGATTTGACTGTTTCGAGGCTAGTCTTGGGGCTGAGGTACAGATCTGGTCTACACGAAGCCAGGTACCAGAAAG **BglIII (1064)** **Acc65I (1088)**
147 P G Q S V G S A V F D C F E A S L G A E V Q I W S Y T K P R Y Q K

1101 AGCTCAACCTCACACAGCAGCTGCCTGATGGTGAACAATGTCCTTCTGACACTGGATGTCTCTGAGGAGCAGGACTTTAGCTTCTTACTGTACCTGCGTCC **Tth111I (1132)**
180 E L N L T Q Q L P D G D N V L L T L D V S E E Q D F S F L L Y L R P

1201 AGTCCGGATGCTCTCAAATCCTTGTGGTACAAAACTGACTGGACCTCAGAATTAATCTTAAACACACAGACCTGGTTCCTGCTCTGATTCCAG **EcoRI (1333)** **ApaLI (1361)**
213 V P D A L K S L W Y K N L T G P Q N I T L N H T D L V P C L C I Q

1301 GTGTGGTCTGAGCCAGACTCTGAGAGGGTCAAACTTCCGCCCTCCGGGAAGATCCCGGTGCACACAGGAACCTCTGGCAGATAGCCAGGCTGCGGG **BstXI (1408)** **PshAI (1477)**
247 V W S L E P D S E R V E F C P F R E D P G A H R N L W H I A R L R

1401 TACTGTCCCAGGGGATGGCAGCTAGATGCGCCTTGTGCTGCTGCCGGCAAGGTAACACTGTGCTGGCAGGCACCAGACCAGAGTCCCTGCCAGCCACT **Bsp120I (1642)**
280 V L S P G V W Q L D A P C C L P G K V T L C W Q A P D Q S P C Q P L

1501 TGTGCCACAGTGCACAGGAAGCCACTGTGAATGAGCCACAAGATTTCCAGTTGGTGGCAGGCCACCCAACTCTGTGTCAGGTGAGCACCTGG **BsrGI (1726)**
313 V P P V P Q K N A T V N E P Q D F Q L V A G H P N L C V Q V S T W

1601 GAGAAGTTCAGTGCAGCGTGTGGGCTGACTCCTTGGGGCCTTCAAGGATGATATGCTGTTAGTGGAGATGAAAACCGGCCTCAACAACACAT **NeoI (1856)**
347 E K V Q L Q A C L W A D S L G P F K D D M L L V E M K T G L N N T

1701 CAGTCTGTGCTTGAACCCAGTGGCTGTACACACTGCCAGCATGGCTCCACGAGAGCTGCTCGCCTGGGAGAGGAGTTGCTGCAAGACTCCGATC **NeoI (1856)**
380 S V C A L E P S G C T P L P S M A S T R A A R L G E E L L Q D F R S

1801 ACACCAGTGTATGCAGCTGTGGAACGATGACAACATGGGATCGCTATGGCCCTGCCCATGGACAAGTACATCCACAGGCGCTGGTCTAGTATGGCTG **BsrBI (2009)**
413 H Q C M Q L W N D D N M G S L W A C P M D K Y I H R R W V L V W L

1901 GCCTGCTACTCTTGGCTGCGGCGCTTTTCTTCTCTCTTCTAAAAAGGACCGCAGGAAAGCGCCGCTGCTCCCGCACGGCTTGTCTCTCCACT **BssHIII (2105)** **SdaI (2151)**
447 A C L L L A A A L F F F L L L K K D R R K A A R G S R T A L L L H

2001 CCGCCGACGGAGCGGGCTACGAGCGTCTGGTGGGAGCACTGGCGTCCGCGTTGAGCCAGATGCCACTGCGCGTGGCCGTGGACCTGTGGAGCCGCCGGA **BssHIII (2105)** **SdaI (2151)**
480 S A D G A G Y E R L V G A L A S A L S Q M P L R V A V D L W S R R E

2101 GCTGAGCGCGACGGAGCCCTAGCTGGTTCACCACCAGCGACGCCGTATCTGCAGGAGGGTGGCGTGGTAATCCTTCTTCTGCGCCGCGGCGCTG **BstAPI (2211)** **XmaI (2239)** **SrfI (2238)**
513 L S A H G A L A W F H H Q R R R I L Q E G G V V I L L F S P A A V

2201 GCGCAGTGTGAGCAGTGGCTGCAGCTCCAGACAGTGGAGCCCGGGCCGATGACGCCCTCGCCGCTGGCTCAGTGCCTGCTACCCGATTTCTGCAAG **BstAPI (2211)** **XmaI (2239)** **SrfI (2238)**
547 A Q C Q Q W L Q L Q T V E P G P H D A L A A W L S C V L P D F L Q

2301 GCCGGCGACCGCGCTACGTCGGGTTACTTCCAGGGCTGTGACCCAGACTCTGTGCCCTCCCGTTCGCGTCCCGCGCTTCTCCCTGCC **BsrBI (2383)**
580 G R A T G R Y V G V Y F D G L L H P D S V P S P F R V A P L F S L P

2401 CTCGACGTGCGCGCTTCTGGATGCACTGCAGGGAGGCTGCTCCACTTCCGCGGGCGACCCGCGGACCGGGTGAACGAGTGACCCAGGCGCTGCGG **NgoMIV (2409)** **RsrII (2465)** **RsrII (2497)**
613 S Q L P A F L D A L Q G G C S T S A G R P A D R V E R V T Q A L R

2501 TCCGCCCTGGACAGCTGTACTTCTAGCTCGGAAGCCAGGCTGCTGCGAGGAATGGGACCTGGGACCTGCACTACACTAGAATAAAAGCCGATACAGT **SandI (2562)**
647 S A L D S C T S S S E A P G C C E E W D L G P C T T L E •

MseI (2611)
NheI (2605)
 2601 ATTCCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGA

HpaI (2743) **MfeI (2754)**
 2701 TGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAG

EcoRI (2839)
 2801 GTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCT

2901 TTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGT

SspI (3078) **SwaI (3092)**
 3001 ATTTTCCAAGGTTTGAAGTACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAATATTCAGAAATAATTTAAAT

3101 ACATCATTGCAATGAAAAAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACA

3201 AAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACC

141 • N R T Y K L P I L E E I T T K V
BstXI (3382)
 3301 AGCTTGCCATTATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGT

123 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 R D
 3401 CCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGAC

90 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 V
 3501 AGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGTCCCTCATAG

57 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 Y
BbsI (3663)
XmnI (3659)
 3601 AGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTAT

23 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 (3725)
 3701 ACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGA

SpeI (3880)
 3801 CCTCCCACGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCC

3901 ATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCG

SnaBI (4008)
 4001 ATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAG

NdeI (4113)
 4101 GGGCGTACTTGGCATATGATACTTGTACTGTAAGTGGCGAGTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGT

SdaI (4291) **PacI (4299)**
 4201 TACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGCTGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCCCTGCAGGT

BspLU11I (4309)
 4301 TAAITAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGGCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCA

4401 TCACAAAATCGACGCTCAAGTCAAGTCAAGTGGCGAAACCCGACAGGACTATAAAGATACCAGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTT

4501 CCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGG

ApaLI (4623)
 4601 TCGTTCGCTCCAAGTGGGCTGTGTGCACGAACCCCGTTCAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACA

4701 CGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGC

4801 TACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGGCAAAACAAACCCGCTG

4901 GTAGCGGTGGTTTTTTTGGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTG

PacI (5039) **SwaI (5048)** **NotI (5058)**
 5001 GAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTG

5101 TTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAAGTGAAGTGCAGG

5201 TGCCAGAACATTTCTCTATCGAA