



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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC **PvuII (239)** **Bsu36I (291)**

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCCTCTGAACTGCGTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT **NgoMIV (441)**

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCAACATGTTTTCAGGCTTACCCTCAACTGTGTCCTGCTGCT **KasI (535)** **AgeI (552)** **BspLU11I (560)**

601 GCTGCAACTACTACTTGAAGGTCATTGGAAGATGTTATAAGGTTGAGGTTGGTAAATGCTATCTGCCCTGCAGTTACTCTACTACCTACCTGCTG **1 M F S G L T L N C V L L L**
13 L Q L L L A R S L E D G Y K V E V G K N A Y L P C S Y T L P T S G
70 G A C A C T T G T G C C T A T G T G C T G G G C A A G G G A T T C T G C C T T G G T C A C A G T G T A C C A A T G A G T T G C T C A G A A C T G A T G A A A G A A A T G T G A C A T A T C A G A A A
46 T L V P M C W G K G F C P W S Q C T N E L L R T D E R N V T Y Q K

800 TCCAGCAGATACCAGCTAAAGGGCGATCTCAACAAAGGAGATGTGTCTCTGATCATAAAGAAATGTGACTCTGGATGACCATGGGACCTACTGCTGCAGGA **EcoO109I (880)** **NcoI (876)**
80 S S R Y Q L K G D L N K G D V S L I I K N V T L D D H G T Y C C R

900 TACAGTTCCTGGTCTTATGAATGATAAAAAATTAGAACTGAAATAGACATCAAAGCAGCCAAGGTCCTCCAGCTCAGACTGCCATGGGGACTCTAC **NcoI (984)**
113 I Q F P G L M N D K K L E L K L D I K A A K V T P A Q T A H G D S T

1000 TACAGCTTCCAAGAACCCTAACCCAGGAGAGAAATGGTTCCAGAGACACAGACTGGTGACCTCCATAATAACAATGGAACAAAAATTTCCACATGG **XcmI (1065)** **BstEII (1056)**
146 T A S P R T L T T E R N G S E T Q T L V T L H N N N G T K I S T W
1100 GCTGATGAAATTAAGGACTCTGGAGAAACGATCAGAAGCTGATCCACATTGGAGTGGGAGTCTCTGCTGGTTGACCTGGCACTTATCATTGGTGTCT
180 A D E I K D S G E T I R T A I H I G V G V S A G L T L A L I I G V

1200 TAATCCTTAAATGGTATTCTGTAAAGAAAAAGAAGTTATCGAGTTTGAGCCTTATTACTGGCCAACCTGCCTCCAGGAGGGTTGGCAATGCAGGAGC **MscI (1259)**
213 L I L K W Y S C K K K L S S L S L I T L A N L P P G G L A N A G A

1300 AGTCAGGATTCGCTCTGAGGAAAATATCTACACCATCGAGGAGAACGTATATGAAGTGGAGAATTCAAATGAGTACTACTGCTACGTCAACAGCCAGCAG **EcoRI (1359)** **ScaI (1370)**
246 V R I R S E E N I Y T I E E N V Y E V E N S N E Y Y C Y V N S Q Q

1400 CCATCCTGACCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAAT **MscI (1416)** **NheI (1410)**
280 P S •

1500 TTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACAAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTG **HpaI (1548)** **MfeI (1559)**

1600 TGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTAACTCCAATCAAGCCTCTACTTG **EcoRI (1644)**
1700 AATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTTGGCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATA

1800 TAGTGTATTTTCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTGTAGTAAATATTCAGAAATAAT **SapI (1826)** **SspI (1883)** **Swal (1897)**

1900 TTAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAG **EcoO109I (1958)**

2000 GGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCTCAATGGTGTT **1+1 • N R T Y K L P I L E E I T T**

2100 TTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGG **SacI (2158)** **BstXI (2187)**
125 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 I S
2200 ATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGC
92 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

2300 ACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGTCC **StuI (2322)**
59 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 D

2400 TCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTGAGTCG **BbsI (2468)** **XmnI (2464)**
25 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

2500 TATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTA
AseI (2530) SacI (2587)

2600 TATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAA
SpeI (2685)

2700 ACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTA

2800 ATAGCGTAGTAATACTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGGGGCCATTTACCGTCATTGACGT
SnaBI (2813)

2900 CAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTAT
NdeI (2918)

3000 TGGCGTTACTATGGGAACATACGTCATTATTGACGTCATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCCCT
SdaI (3096)

3100 GCAGGTTAATTAAAGACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGA
PacI (3104) BspLU11I (3114)

3200 CGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCT
3300 CCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGG

3400 TGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGT
ApaLI (3428)

3500 AAGACAGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAAC
3600 TACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA
3700 CCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGC

3800 TCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTCATTACATC
PacI (3844) SwaI (3853) EagI (3864) NotI (3863)

3900 TGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAG
4000 TGCAGGTGCCAGAACATTTCTCTATCGAA