



PvuI (7)
SgfI (6) 1 GGATCTGGATCGTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82)

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT NgoMIV (441)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAACATGTTTCGAGGGCGCCTGGTCCAGGGCTCCATCCTCAA KasI (535) **AgeI (552)** **BspLU11I (560)** **BssHII (571)** **AscI (570)**
1 M F E A R L V Q G S I L K

601 GAAGTGTGGAGGCACTCAAGGACCTCATCAACGAGGCTGCTGGGATATTAGTCCAGCGGTGAAACCTGCAGAGCATGGACTCGTCCCAGTCTCT EcoO109I (620) **StuI (635)**
13 K V L E A L K D L I N E A C W D I S S S G V N L Q S M D S S H V S

701 TTGGTGCAGTCCACCTGCGGTCTGAGGGCTTCGACACCTACCGTGCACCGCAACCTGGCCATGGGCGTGAACTCACCAGTATGTCCAAAATACTAA MscI (758)
47 L V Q L T L R S E G F D T Y R C D R N L A M G V N L T S M S K I L

801 AATGCGCCGCAATGAAGATATCATTACTAAGGCGCAAGATAACGCGGATACCTTGGCGTAGTATTTGAAGCACAAACCAGGAGAAAGTTTCAGA NgoMIV (805) **EcoRV (817)**
80 K C A G N E D I I T L R A E D N A D T L A L V F E A P N Q E K V S D

901 CTATGAAATGAAGTTGATGGATTAGATGTTGAACAACCTGGAATTCAGAACAGGAGTACAGCTGTGTAGTAAAGATGCCTTCTGGTGAATTTGCACGT EcoRI (941) **PvuII (960)**
113 Y E M K L M D L D V E Q L G I P E Q E Y S C V V K M P S G E F A R

1001 ATATGCCGAGATCTCAGCATATTGGAGATGCTGTTGTAATTTCTGTGCAAAAGACGGAGTGAATTTCTGCAAGTGGAGAATTGGAATGGAAACA BglIII (1008)
147 I C R D L S H I G D A V V I S C A K D G V K F S A S G E L G N G N

1101 TTAATTTGCACAGACAAGTAATGTCGATAAAGAGGAGGAAAGCTGTTACCATAGAGATGAATGAACAGTTCACTAATTTTGCAGTACCTGAA XmnI (1162) **Acc65I (1190)**
180 I K L S Q T S N V D K E E E A V T I E M N E P V Q L T F A L R Y L N

1201 CTTCTTTACAAAAGCCACTCCACTCTTCAACGGTGACACTCAGTATGTCGAGATGATCCCTTGTGTAGAGTATAAAATGCGGATATGGGACAC MscI (1357)
213 F F T K A T P L S S T V T L S M S A D V P L V V E Y K I A D M G H

1301 TTAATACTACTTGGCTCCCAAGATCGAGGATGAAGAAGGATCTTAGGCAGTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCA NheI (1351)
247 L K Y Y L A P K I E D E E G S •

1401 CAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACA HpaI (1489)

1501 CAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCTAAATACA MfeI (1500) **EcoRI (1585)**

1601 GCATAGCAAACTTAACTCCAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTA

1701 GCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATATAGTATTTTCCCAAGGTTTGAAGTACTCTTCTTTATGTTTTAAATGCACTGA SapI (1767)

1801 CCTCCACATTCCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAAATCCAGATGCTCAA SspI (1824) **Swal (1838)** **EcoO109I**

1901 GGCCCTTCATAATATCCCCAGTTTGTAGTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTT ScaI (2099)
141 • N

2001 CCTGGTGTACTTGGGGGATGAGTTTCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCCAGGAGCATAGTCAGAGATG 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 D P A Y D S I

2101 AGCTCTCTGCACATGCCACAGGGGTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCT BstXI (2128)
105 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 V I T D F D K Q

2201 GCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGT StuI (2263)
72 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 V A S I I E G T

2301 CTTGGTCTGTAGGGCCCGCCGACATGGTGTCTGTTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAG
39 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 L E L D Q Q S

2401 ATGTTGAAGGTTTCATGGTGGCCCTCTATAGTGTGAGTCGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGT XmnI (2405) **AseI (2471)**
5 I N F T K M

2501 CTCCAGCTTATCTGACGGTTCACATAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTAC
SacI (2528)

2601 GACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCC
SpeI (2626)

2701 ACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCAATGATC
SnaBI (2754)

2801 TGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACC
NdeI (2859)

2901 GTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGG

3001 TCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAAGAACTGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGG
PacI (3045) SdaI (3037) BspLU11I (3055)

3101 CCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAG
BspLU11I (3055)

3201 ATACCAGGCGTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTG

3301 GCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCT
ApaLI (3369)

3401 GCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTA

3501 TGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTC

3601 GGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGAT

3701 CTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAA
PacI (3785) SmaI (3794)

EagI (3805)
NotI (3804)

3801 ATC AGCGGCCGAATAAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACATAACATACGCTCTCCATCAAACAAAACGA
3901 AACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA