



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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT **NgoMIV (441)**

501 TCTGTTTGTCCGGCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTAGGGAGGGCCACCATGGAAGATTTTAAACATGGAGAGTGACAG **AgeI (552)** **NcoI (569)**
1 M E D F N M E S D S

BglII (624)
601 CTTTGAAGATTTCTGAAAGGTGAAGATCTTAGTAATTACAGTTACAGCTTACCCCTGCCCTTTTCTACTAGATGCCGCCCATGTGAACCAGAATCC
10 F E D F W K G E D L S N Y S Y S S T L P P F L L D A A P C E P E S
701 CTGGAAATCAACAAGTATTTTGGTCTATTATCTATGCCCTGGTATTCTGCTGAGCCTGCTGGGAAACTCCCTGCTGATGCTGGTCACTTATACAGCA
44 L E I N K Y F V V I I Y A L V F L L S L L G N S L V M L V I L Y S

BsrBI (807)
EagI (804)
801 GGTTCGGCCGCTCCGTCCTGATGTCTACCTGCTGAACCTAGCCTTGGCCGACCTACTCTTTCGCTGACCTTCCCCTGCTGGCCGCTCCAAGGTGAA
77 R V G R S V T D V Y L L N L A L A D L L F A L T L P I W A A S K V N
901 TGGCTGGATTTTTGGCACATTCCTGTGCAAGGTGCTCACTCCTGAAGGAAGTCAACTTCTATAGTGGCATCCTGCTACTGGCTGCATCAGTGTGGAC
110 G W I F G T F L C K V V S L L K E V N F Y S G I L L L A C I S V D

Eco47III (1043) **NdeI (1062)**
1001 CGTTACCTGGCCATTGTCCATGCCACACGCACACTGACCCAGAAGCGCTACTTGGTCAAATTCATATGTCTCAGCATCTGGGCTGTGCTTGTCTCTGG
144 R Y L A I V H A T R T L T Q K R Y L V K F I C L S I W G L S L L L
1101 CCCTGCCTGTCTACTTTTTCCGAAGGACGCTACTCATCCAATGTTAGCCAGCCTGCTATAGGACATGGGCAACAATACAGCAAACCTGGCGGATGCT
177 A L P V L L F R R T V Y S S N V S P A C Y E D M G N N T A N W R M L

BstXI (1215)
BamHI (1205) 1201 GTTACGGATCCTGCCCGAGTCTTTGGCTTCATCGTGCCACTGCTGATCATGCTGTTCTGCTACGGATTACCCTGCGTACGCTGTTTAAAGGCCACATG
210 L R I L P Q S F G F I V P L L I M L F C Y G F T L R T L F K A H M **BsiWI (1276)**

1301 GGGCAGAAGCACCAGGATGCGGGTCACTTTGCTGTGCTCCTCATCTTCTGCTGCTGGCTGCCCTACAACCTGGTCTGCTGGCAGACACCTCA
244 G Q K H R A M R V I F A V V L I F L L C W L P Y N L V L L A D T L **BspHI (1397)**

EcoO109I (1402) **XcmI (1463)** **PvuII (1488)**
1401 TGAGGACCCAGGTGATCCAGGAGACCTGTGAGCGCCGCAATCACATCGACCGGGCTCTGGATGCCACCGAGATTCTGGGCATCCTTACAGCTGCCTCAA
277 M R T Q V I Q E T C E R R N H I D R A L D A T E I L G I L H S C L N

NeoI (1536)
1501 CCCCCTCATCTACGCTTTCATTGGCCAGAAGTTTCCGCATGGACTCCTCAAGATTCTAGCTATACATGGCTTGTGATCAGCAAGGACTCCCTGCCAAAGAC
310 P L I Y A F I G Q K F R H G L L K I L A I H G L I S K D S L P K D

StuI (1603) **SapI (1619)** **NheI (1670)**
1601 AGCAGGCTTCTTTGTTGGCTCTTCTTCCAGGGCACACTTCCACTACTCTAAGACCTCCTGCCTAAGTGTAGCTGGCCAGACATGATAAGATACATT
344 S R P S F V G S S S G H T S T T L •

1701 GATGAGTTTGGACAAACCACAACATAAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCA

HpaI (1808) **MfeI (1819)**
1801 AATAACAAGTTAAACAACAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGG

EcoRI (1904)
1901 TATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGG

2001 CTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTTTCATTTCTT **SapI (2086)**

SspI (2143) **SwaI (2157)**
2101 TATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAG

EcoO109I (2218)
2201 GCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAATTGGACAGCAAGAAAG

2301 CGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGAGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTC
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 C D

SacI (2418) **BstXI (2447)**
2401 AGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACA
112 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 A V

2501 ATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAG
78 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 V A **StuI (2582)**

2601 CAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAG
45 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 V L

BbsI (2728)
XmnI (2724) AseI (2790)

2701 CTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTC
12 E L D Q Q S I N F T K M

SacI (2847)

2801 AAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTGCGTC
SpeI (2945)

2901 AATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCC
SnaBI (3073)

3001 GTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAA
NdeI (3178)

3101 GTCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGCGTACTTGGCATATGATACACTTGTACT
3201 GCCAAGTGGGCAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATG
PacI (3364)
PstI (3357)
SdaI (3356) BspLU11I (3374)

3301 GCGGGGGTCTGTTGGGCGTCCAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAG
3401 GCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAA
3501 ACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCTT
ApaLI (3688)

3601 TCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGAACCC
3701 CCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTGTCACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACA
3801 GGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCT
3901 GCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATT
4001 ACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGG
EagI (4124)
PacI (4104) SmaI (4113) NotI (4123)

4101 CTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCT
4201 CTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA