



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCCTGTTGCGCCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

SphI (560) **PvuII (589)**
KasI (535) **AgeI (552)**
501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTGAGCATGCCAAGAAGAAGCCGACGCCCATCCAGCTGAACCC
1 M P K K K P T P I Q L N P
601 GGCCCCGATGGCTCGGCGGTTAACGGGACCAGCTCGGCCGAGACCACTGGAGGCCTTGCAAGAAGCTGGAGGAGCTGGAGCTTGCAGAGCAGCAG
13 A P D G S A V N G T S S A E T N L E A L Q K K L E E L E L D E Q Q
701 CGGAAGCGGCTCGAGGCTTTTCTGACGCGAGAAGCAGAAGTGGGGAACTGAAGGATGATGACTTTGAGAAGATCAGCGAACTGGGAGCTGGCAACGGTG
47 R K R L E A F L T Q K Q K V G E L K D D D F E K I S E L G A G N G
XhoI (709) **BbsI (805)** **XcmI (819)** **BspEI (881)**
801 GAGTGGTCTTCAAGTCTCCACAAAGCCATCTGGCCTGTTATGGCTAGAAAAGCTGATCCACCTGGAGATCAAACCCGCAATCCGGAACCAGATCATCCG
80 G V V F K V S H K P S G L V M A R K L I H L E I K P A I R N Q I I R
901 GGAGCTGCAGTACTGCACGAGTGAACCTCCCGTACATCGTGGGCTTCTACGGGCTTCTACAGCGACGGCGAGATCAGCATCTGCATGGAGCACATG
113 E L Q V L H E C N S P Y I V G F Y G A F Y S D G E I S I C M E H M
1001 GATGGTGGTCTTGGATCAAGTCTGAAGAAAGCTGGAAGAATTCTGAGCAAAATTTAGGAAAAGTTAGCATTGCTGTGATAAAAGGCTGACCTATC
147 D G G S L D Q V L K K A G R I P E Q I L G K V S I A V I K G L T Y
BbrPI (1160)
1101 TTCGGGAGAAGCACAAGATTATGCACAGAGATGTCAAGCCATCCAACATTCTAGTGAACCTCACGTGGGAGATCAAACCTGTGATTTTGGGTGAGCGG
180 L R E K H K I M H R D V K P S N I L V N S R G E I K L C D F G V S G
XcmI (1220) **MscI (1217)** **BspLU11I (1247)**
1201 GCAGCTAATTGACTCTATGGCCAACTCTTCTGGGACGAGATCCTACATGTCGCTGAGAGACTCCAGGGGACTCACTACTCTGTGCAGTCGGACATC
213 Q L I D S M A N S F V G T R S Y M S P E R L Q G T H Y S V Q S D I
1301 TGGAGCATGGGCTCTCTCTGGTGGAGATGGCAGTTGGGAGATACCCATTCTCTCTGATGCCAAGGAGCTGGAGCTACTGTTGGATGCCATGTGG
247 W S M G L S L V E M A V G R Y P I P P P D A K E L E L L F G C H V
NdeI (1457) **NeoI (1481)**
1401 AAGGAGACGAGCCGAAACACCACCCAGGCCAAGGACCCCTGGGAGGCCTCTCAGCTCATATGGAATGGACAGCCGACCTCCCATGGCAATTTTGGATT
280 E G D A A E T P P R T P G R P L S S Y G M D S R P P M A I F E L L
1501 GTTGATTACATTGTCAATGAGCCTCTCCAAAACCTCCAGTGGAGTATTGAGTTCAGGATTTTGTGAATAAATGCTTAATAAAGAACCT
313 L D Y I V N E P P P K L P S G V F S L E F Q D F V N K C L I K N P
BglII (1611) **BglII (1648)**
1601 GCAGAGAGAGCAGATCTGAAGCAGCTCATGGTACATGCTTTCATCAAAGATCTGACGCCGAGGAGGTAGACTTCGCAGGCTGGCTTGTCCACCATTG
347 A E R A D L K Q L M V H A F I K R S D A E E V D F A G W L C S T I
MscI (1781) **NheI (1775)**
1701 GGCTTAACCAGCCAGCACACCAACCCACGCTGCCAGCATCTGAGCCTTTAGGAAGCAGCAAAGGAATTCTCTGCTAGCTGGCCAGACATGATAAGAT
380 G L N Q P S T P T H A A S I •
1801 ACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAG

HpaI (1913) **MfeI (1924)**
1901 CTGCAATAAAACAGTTAAACAACAACAATTGCATTCTTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAA
2001 TGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATC
2101 AGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTATGAGTAAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTCTTCAT

SspI (2248) **SwaI (2262)**
2201 TTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAATAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTT
2301 ATTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAGGAACCTTAAATGAAAATGGACAGCAA
2401 GAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAG
144 • 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
SacI (2523) **BstXI (2552)**
2501 CAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAG
113 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 A

2601 CCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTG
80 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
2701 GACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCC
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 (2837)

BbsI (2833)

XmnI (2829)

AseI (2895)

2801 ACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTA
13 V L E L D Q Q S I N F T K M

SacI (2952)

2901 TTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATT

SpeI (3050)

3001 GCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTA**CTAGT**CAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAA

SnaBI (3178)

3100 ATCCCCGTGAGTCAAACCGCTATCCAGGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGT

NdeI (3283)

3200 AGGAAAGTCCCATAAAGTCACTGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGA

3300 TGTACTGCCAAGTGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACG

SdaI (3461) PacI (3469) BspLU11I (3479)

3400 TCAATGGGCGGGGTCGTTGGGCGTCCAGCCAGGCGGCCATTTACCGTAAGTTATGTAAC**GCCTGCAGGTTAA**TTAAGA**ACATGTGAGCAAAGGCC**

3498 AGCAAAGGCCAGGAACCGTAAAGGCGCGTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAG

3598 GTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTCCCCCTGGAAGTCCCTCGTGCGCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTG

ApaLI (3793)

3698 TCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGC

3798 ACGAACCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCAC

3898 TGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATC

3998 TGGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGC

4098 AGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACACGTTAAGGGATTTT

EagI (4229)

PacI (4209) SwaI (4218) **NotI (4228)**

4198 GGT**CATGGCTAGTTAATTAACATTTAAATC**AGCGCGCGCAATAAAATATCTTTATTTT**CATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAA**

4298 CATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA