



100

PvuI (7)
SgfI (6) **EcoNI (96)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) **PvuII (239)** **EcoNI (287)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) **AgeI (552)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCATTGGAAGATTCCACACAAGAGTACCACGTGAGAGACAGC
601 ACCTCAACCTGGTTCAGCAGTTCAGGGAGCTCACATTTCTCATATTGCTCAACAGGTATCATCTTTATCAGAAAAGTGAGGAGTCCAGGACTCATCCGAC
13▶ P Q P G S A V Q G A H I S H I A Q Q V S S L S E S E E S Q D S S D
1▶ M E D S H K S T T S E T A

BamHI (728) **KasI (740)**
701 AGCATAGGCTCCTCACAGAAAAGCCACGGGATCCTAGCACGGCGCCACTTACAGAAAAATTTGAAAGACTTATCTTCTGAAGATACACGGGGCAGAA
47▶ S I G S S Q K A H G I L A R R P S Y R K I L K D L S S E D T R G R
801 AAGGAGACGGAGAAAATTCTGGAGTTTCTGCTGCTGTCACTTCTATGTCTGTTCCAACCTCCATCTATCAGACTAGCAGCGGACAGTAATTGCCATTGC
80▶ K G D G E N S G V S A A V T S M S V P T P I Y Q T S S G Q Y I A I A

ScaI (982)
901 CCCAATGGAGCCTTACAGTTGGCAAGTCCAGGCACAGATGGAGTACAGGGACTTACAGACATTAACCATGACAAAATTCAGGCAGTACTCAGCAAGGTACA
113▶ P N G A L Q L A S P G T D G V Q G L Q T L T M T N S G S T Q Q G T

XcmI (1049)
1001 ACTATTCTCAGTATGCACAGACCTCTGATGGACAGCAGATACTGTGCCAGCAATCAGGTGGTTCGTACAAACTGCATCAGGAGATATGCAAACATATC
147▶ T I L Q Y A Q T S D G Q Q I L V P S N Q V V V Q T A S G D M Q T Y
1101 AGATCCGAACTACACCTTACGCTACTTCTGCCACAACTGTGGTGATGACATCTCCTGTGACTCTCACCTCAGACAACTAAGACAGATGACCCCA
180▶ Q I R T T P S A T S L P Q T V V M T S P V T L T S Q T T K T D D P Q

XhoI (1241)
1201 ATTGAAAAGAGAAATAAGGTTAATGAAAAACAGAGAAGCTGCTCGAGAATGTCGCAGAAAAGAAAGAATATGTGAAATGCCTGGAAAACCGAGTTGCA
213▶ L K R E I R L M K N R E A A R E C R R K K K E Y V K C L E N R V A

MscI (1394)
NheI (1388)
1301 GTCCTGAAAATCAAATAAACTCTAATAGAAAGTTAAAACTTTGAAGGATCTTTATTCCAATAAAAAGTGTGTTGATTCTTAAGAAGCTAGCTGGCCA
247▶ V L E N Q N K T L I E E L K T L K D L Y S N K S V •
1401 GACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAAGTAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTG

HpaI (1526)
1501 TAACCATTATAAGCTGCAATAAACAAAGTAAACAACAACAAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTA

EcoRI (1622)
1601 AAACCTCTACAAATGTGGTATGGAATTTAAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATA
1701 AGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTTTATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGA

SspI (1861) **SwaI (1875)**
1801 ACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAA

EcoO109I (1936)
1901 ATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGA
2001 AATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTC
141▶ N R T Y K L P I L E E I T T K V L K G N M E

BstXI (2165)
2101 AATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAG
118▶ 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 V E D S Y
2201 GGGTCCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAAGCAGACAGTACCCCTGCAATGT
84▶ 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 T V R G I Y

StuI (2300)
2301 AGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCCGACATGGTGTCTGTTGTCTCATAGAGCATGGTGTCTTCTC
51▶ 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 L M T I K E

BspHI (2450)
BbsI (2446)
XmnI (2442)
2401 AGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTA
18▶ T A V E V L E L D Q Q S I N F T K M

AseI (2508)
 2501 **TGCCGATGATTAATTGTC**AAACAGCGTGGATGGCGTCTCCAGC T TATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGC

SpeI (2663)
 2601 CTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTGGAAAGTCCCGTTGATTT**ACTAGT**CAAAACAACTCCCATTGACGTCAATGGGG

SnaBI (2791)
 2700 TGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGA

NdeI (2896)
 2800 TGTA CTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCAT

2900 ATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATAC

PstI (3075) **SdaI (3074)** **PacI (3082)** **BspLU11I (3092)**
 3000 GTCATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGT**CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA**TTAAGAA**CA**TG

3098 TGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCGCGGTTGCTGGCGTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAGAAAATCGAC

3198 GCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGCT

3298 TACCGGATACCTGTCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTGCTCCAAG

ApaLI (3406)
 3398 CTGGGCTGTGTGCACGAACCCCGTT**CAGCCGACCGCTGCGC**TTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCAC

3498 TGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAC

3598 AGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTT

3698 TTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACTCAC

EagI (3842) **PacI (3822)** **SwaI (3831)** **NotI (3841)**
 3798 **GTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC** AGCGGCCGAATAAAATATCTTTATTTT**CATTACATCTGTGTGTTGTTTTTGTG**T

3898 GAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAAGTGCCAGAGTCCAGAACATTT

3998 TCTATCGAA