



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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)**
201 **GTGAACGTTCTTTTTCGCAACGGGTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCGCCCTACCTGAGGCC**

301 **GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGCTTAGGTAAGTTTAAAGCTCAGGTCGAGACC**

NgoMIV (441)
401 **GGGCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT**

501 **TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGGCGCTAC** **AgeI (552)** **NcoI (560)**
CTGAGATCACCGGTACCATGGCAGTGTGAGCCCTTGAGGAGCTGGAGGAAGA
1 ▶ M A V S A P L R S L E E E

BstXI (611) **SmaI (632)** **EcoRV (685)**
601 **GGTGACCTGCTCCATCTGCTGGATTACCTGAGGGACCCAGTGACCATCGACTGTGGCCATGTCTTCTGTCGCAGCTGCACAAGTATATCCGCCCCATA**
13 ▶ V T C S I C L D Y L R D P V T I D C G H V F C R S C T S D I R P I

BsrBI (721) **NheI (771)**
701 **TCGGGAACCGCCTGTCTGCCGCTCTGCAAGAAGCCCTTTAAGAAGGAGAACATCCGACCCGTGTGGCAGCTAGCAAGTCTGGTGAGAACATTGAAC**
47 ▶ S G N R P V C P L C K K P F K K E N I R P V W Q L A S L V E N I E

BsrBI (868)
801 **GGCTGAAGGTGGACAATGGCAGACAGCCAGGAGAGCTCGCCCGCAGCCACAGGACATGAAGTTGTGTGAGCGCACAGGAGAAGCTACTACTACTG**
80 ▶ R L K V D N G R Q P G E L A R E P Q D M K L C E R H Q E K L H Y Y C

XmaI (941)
901 **TGAAGATGATGGCAACTGTTGTGTGTGTGTGTGCAGGGAGTCCCGGGAGCACGCCCCACACTGCAGTCCTGGTGGAGAAAGCCGCCCTGCCTCACAGA**
113 ▶ E D D G K L L C V M C R E S R E H R P H T A V L V E K A A L P H R

1001 **GAGAAAATTCTGAACCACTTGAACACCTAAGGAGAGACAGACAAAATCCAGGGCTTTCAAGCCAAAGGGAGAAGCTGATATTCTGGCTGCACCTGACAA**
147 ▶ E K I L N H L N T L R R D R D K I Q G F Q A K G E A D I L A A L T

BstAPI (1170)
1101 **AGTGCAGGAGCAGAGGCCAGTACATTGTGGCGAATTAAGCAGGGCCACCAGTTTCTAAAGAAGCGGGAGCAGCACCTGCTAGACCAGCTGGCCACCCT**
180 ▶ K L Q E Q R Q Y I V A E F K Q G H Q F L K K R E Q H L L D Q L A T L

PshAI (1266)
1201 **GGAGCAGCTCCTCACCGAGGGCAGGGA** **XmaI (1238)** **AgeI (1259)**
AAGTTCAAGACCCGGCGTCACTGAGCTTGACCGGTTGACTCTGGTCACTCAGAGCTGGAGGGCAAGGCA
213 ▶ E Q L L T E G R E K F K T R G V S E L D R L T L V I S E L E G K A

1301 **CGACAGCCAGCTGCAGAGCTGATGCAGGATGTCTGCCTACACAGGACACCAAGGACTTCCGCAACAAGTACCACGGAAGAAGTTCTGGATTGGAAAG**
247 ▶ R Q P A A E L M Q D V C A T Q D T K D F A N K Y P R K K F W I G K

XcmI (1400) **EcoRI (1432)** **StuI (1464)**
1401 **CCATCCCTCACATGGTTAAAAGAAAGGCAGGAGAATTCTCAGATAAACTCTTTCTGTCAGCAGGCCTGAGGCAGTTCACGGGCAAGCTGCTGAGAGA**
280 ▶ A I P H M V K R K A G E F S D K L L S L Q R G L R Q F Q G K L L R D

1501 **CTTGAGTATAAGACAGTAAGCGTCACCCTGGACCCACAGTCGCCAGTGATACCTACATCTTTCAGAGGACTGGAAGTGTGTGACCTATACTGGCCAA**
313 ▶ L E Y K T V S V T L D P Q S A S G Y L H L S E D W K C V T Y T G Q

Bst1107I (1681)
1601 **TACCAGAGTACTGTCTGCTCCCCAGCAGTTTACTGTGAGCCAGGAGTGTGGGACGAAGGGCTTCCATGGGGAAAGTATACTGGGAAGTAGAGT**
347 ▶ Y Q S D C L L P Q Q F D C E P G V L G S K G F T W G K V Y W E V E

1701 **TGGAGAGAGAAGGCTGGTTCAGAGGATGAAGAAGAGGGGGAGGAGGAAGAAGAAGGGGAAGAAGGAGGAAGAAGACGAGGAGGTTGGCTATGGGGACGGATA**
380 ▶ L E R E G W S E D E E E G E E E E E G E E E E D E E V G Y G D G Y

1801 **CGAAGACTGGAAACAGATGAAGAAGACGAATCACTGGGGAAAGAGGAGGAGGAAGAAGAAGAAGTTTCAGGAAAGCTGCATGGTGGGA**
413 ▶ E D W E T D E E D E S L G E E E E E E E E E V Q E S C M V G

Bsp120I (1961)
1901 **GTGGCCAAAGACTCTGTGAAGAGGAAAGGGACCTCTCCCTGCGACCAAGAAGATGGTGTGGGCCCTTCGGCTCTCCCCTCAGGTATCTGGGCCAACA**
447 ▶ V A K D S V K R K G D L S L R P E D G V W A L R L S P S G I W A N

2001 **CGAGCCAGAGGCCAGCTGTTCCCGGTGCTGCGGCCCGGAGAGTGGGCATCGCCCTGGATTATGAAGGGGGCACTGTGACATTACCAATGCAGAGTC**
480 ▶ T S P E A Q L F P V L R P R R V G I A L D Y E G G T V T F T N A E S

2101 **CCAGGAACCTATACCTTACGACCACCTTACCCTGCGCGCTGGTTCCCTTCTGTGGCTCAAGTGGCCAGGAGCACGCTTCTGCTGAGACCCTG**
513 ▶ Q E L I Y T F T T T F T R R L V P F L W L K W P G A R L L L R P •

AvrII (2210)
2201 **ACTCCAGAACCTAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGCAGTGAATAAATGCTTTATTTGT**

HpaI (2354) **MfeI (2365)**
2301 **GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACCAAGTTAAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGG**

EcoRI (2450)
2401 **AGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGAATTCTAAAATACAGCATAGCAAACCTTAACCTCCAAATCAAGCCTCT**

2501 ACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTTTCATGGAGTTTA

SapI (2632) **SspI (2689)**

2601 AGATATAGTGATTTTTCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATGAAAAATTCAGAA

SwaI (2703)

2701 ATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGA

2801 CTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTCCCTCAATGG

BstXI (2993)

2901 TGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCT

127 T 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

3001 GATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCT

94 I S 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

StuI (3128)

3101 TCAGCACAGACAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGT

60 E A C V T V R G I Y A E I H V A S I E G T K T R I A A G V H H K N

3201 TGTCCTCATAGACATGGTGATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTG

27 D 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

AseI (3336)

3301 AGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCT

SpeI (3491)

3401 GCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAA

3501 AACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCA

SnaBI (3619)

3601 TGGTAATAGCGATGACTAATACGTAGATGTAAGTCCATAAGGTGTAAGTCCATAAGGTGTAAGTCCATAAGGTGTAAGTCCATAAGGTGTAAGTCCATAAGGT

NdeI (3724)

3701 GACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTC

3801 CCTATTGGCGTTACTATGGGAACATACGTCAATATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAA

PacI (3910)

SdaI (3902) **BspLU11I (3920)**

3901 CGCCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTCTGGCGTTTTTCCATAGGCTCCGCCCC

4001 CCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAAGTCCCTCGTGC

4101 GCTCTCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAG

ApaLI (4234)

4201 TTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGACGCAACCCCGTTGAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAAC

4301 CCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGATTCTTGAAGTGGTGGC

4401 CTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACA

4501 AACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGGTCT

EagI (4670)

PacI (4650) **SwaI (4659)** **NotI (4669)**

4601 GACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATT

4701 ACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGT

4801 GCAAGTGCAGGTGCCAGAATTTCTCTATCGAA