



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

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCAGCGCGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BspHI (560)
AgeI (552) 501 TCTGTTTGTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTATCATGAGGGAGGACCTGCTCCTTGGCTTTTTGCTTCTGGG

BbsI (624) **Bsp120I (659)**
601 ACTGCTTTGGAAAGCTCCAGTTGTGTCTTCAGGGCCTGGGAAAGAGCTCCCCGTGGTGTGGGCCAGGAGGGAGCTCCCGTCCATCTTCCCTGCAGCCTC
13▶ L L W E A P V V S S G P G K E L P V V W A Q E G A P V H L P C S L

BamHI (714) **MscI (768)**
701 AAATCCCCAACCTGGATCTAACTTTCTACGAAGAGGAGGGTATCTGGCAACATCAACCAGACAGTGGCCAAACCCACTCCCATCCCGGCCCTTGACC
47▶ K S P N L D P N F L R R G G V I W Q H Q P D S G Q P T P I P A L D

FspI (875) **BstAPI (888)**
801 TTCACCAGGGGATGCCCTGCCTAGACAACCCGCACCCGGTGCCTACACGGTGCCTGAGCGTGGCTCCAGGAGGCTGGCAGCGGGAGGCGAGCCCTGCA
80▶ L H Q G M P S P R Q P A P G R Y T V L S V A P G G L R S G R Q P L H

BbrPI (904) **FspI (968)**
901 TCCCCACGTGCAGCTGGAGGAGCGCGCCTCCAGCGCGGGGACTTCTCTGTGGTTCGCGCCAGCTTCGCGACCGATGCGGGCGAGTACCACGCCACC
113▶ P H V Q L E E R G L Q R G D F S L W L R P A L R T D A G E Y H A T

Bsu36I (1073)
1001 GTGCGCTCCCGAACCGCGCCTCTCCTGCAGTCTCCGCTGCGCGTGGCCAGGCTCGATGATTGCTAGTCCCTCAGGAGTCTCAAGCTGTCTGATT
147▶ V R L P N R A L S C S L R L R V G Q A S M I A S P S G V L K L S D

ApaLI (1147)
1101 GGGTCCTTTGAACTGCTCCTTACGCCGCTCCTGACCGCCAGTCTCTGTGCACCTGGTTCCAGGGCCAGAACCAGTGCCTGTCTACAACCTACCGCGTCA
180▶ W V L L N C S F S R P D R P V S V H W F Q G Q N R V P V Y N S P R H
1201 TTTTTAGCTGAAACTTTCTGTACTGCCCAAGTCAGCCCCCTGGACTCTGGGACCTGGGGCTGTGTCTCACCTACAGAGATGGCTTCAATGTCTCC
213▶ F L A E T F L L L P Q V S P L D S G T W G C V L T Y R D G F N V S
1301 ATCACGTACAACCTCAAGTTCTGGGTCTGGAGCCCGTAGCCCTCTGACAGTGTACGCTGCTGAAGTTCTAGGGTGGAGCTGCCCTGTCATTTGCCCC
247▶ I T Y N L K V L G L E P V A P L T V Y A A E G S R V E L P C H L P

SandI (1408)
1401 CAGGAGTGGGACCCCTTCTTGTCTCATTGCCAAGTGGACTCCTCCTGGAGGAGTCTGAGCTCCCGTGGCTGGAAAGAGTGGCAATTTTACCCTTCA
280▶ P G V G T P S L L I A K W T P P G G G P E L P V A G K S G N F T L H

XmaI (1574)
1501 CCTTGAGGCTGTGGGTCTGGCACAGGCTGGGACCTACACCTGTAGCATCCATCTGCAGGGACAGCAGCTCAATGCCACTGTACGTTGGCGGTATCACA
313▶ L E A V G L A Q A G T Y T C S I H L Q G Q Q L N A T V T L A V I T

XmaI (1631)
1601 GTGACTCCCAAATCCTTCGGGTTACCTGGCTCCCGGGGAAAGCTGTTGTGTGAGGTAACCCCGCATCTGAAAGGAAAGATTTGTGTGGCGTCCCCTGA
347▶ V T P K S F G L P G S R G K L L C E V T P A S G K E R F V W R P L

Bsp120I (1722)
XmaI (1719)
SrfI (1718) **XcmI (1791)**
1701 ACAATCTGTCCAGGAGTTGCCCGGCCCTGTGCTGGAGATTACAGGAGGCCAGGCTCCTTGTGAGCGATGGCAGTGTACGAGTGTACGAGGCCAGAGGCT
380▶ N N L S R S C P G P V L E I Q E A R L L A E R W Q C Q L Y E G Q R L
1801 TCTTGAGCGACAGTGTACGCCGACAGTCTAGCTCAGGCGCCACAGTCTAGGAGAATCTCAGGTGACCTTAAAGGAGGCCATCTCGTTCTCGTTCTC
413▶ L G A T V Y A A E S S S G A H S A R R I S G D L K G G H L V L V L

XmnI (1979)
1901 ATCCTTGGTGCCTCTCCCTGTTCTTTTGGTGGCCGGGCTTTGGCTTCACTGGTGGAGAAAACAGTTGCTACTGAGAAGATTTCTGCCTTAGAAC
447▶ I L G A L S L F L L V A G A F G F H W W R K Q L L L R R F S A L E
2001 ATGGGATTACGCCATTTCCGGCTCAGAGGAAGATAGAGGAGCTGGAGCGAGAAGTGGAGACGGAGATGGGACAGGAGCCGAGCCCGAGCCGAGCCACA
480▶ H G I Q P F P A Q R K I E E L E R E L E T E M G Q E P E P E P E P Q
2101 GCTGGAGCCAGCCAGGACGCTGACCTGGAGCCGAGGACGACGAGGTCAGCAGCTCCGCCGCCCGCCCGCCCGCCGAATAAATCCCTGT
513▶ L E P E P R Q L •

NheI (2209)
SphI (2205) **MscI (2215)**
2201 CAGCAGCATGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTT

HpaI (2347) **MfeI (2358)**
2301 GTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACCTGATTATTTATGTTTCAGGTTTCAGGGGAGGTGTG

EcoRI (2443)
2401 GGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACTCCAAATCAAGCCTCTACTTGAA

2501 TCCTTTCTGAGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATA

2601 **SapI (2625)** **SspI (2682)** **SwaI (2696)**
 GTGTATTTTCCCAAGTTTGAAC TAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAAATATTCAGAAAATAATTT

2701 AAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGA CTTAGGG

2801 AACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTT
 141 • N R T Y K L P I L E E I T T K

2901 **BstXI (2986)**
 GACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACACCCTGATGGAT
 125 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 I S

3001 CTGTCCACCTCATCAGAGTAGGGGTGCCGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCAC
 91 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 E A C

3101 AGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCGACATGGTGCTTGTGTCTC
 58 V T V R G I Y 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

3201 **BbsI (3267)** **XmnI (3263)**
 ATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTA
 25 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

3301 **AseI (3329)**
 TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATA

3401 **SpeI (3484)**
 TAGACCTCCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAAC

3501 TCCCATTGACGTCAATGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT

3601 **SnaBI (3612)**
 AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGGCCATTACCCTGATTGACGTCA

3701 **NdeI (3717)**
 ATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTG

3801 **SdaI (3895)**
 GCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTGAGCCAGGCGGGCCATTACCCTAAGTTATGTAACCGCTGC

3901 **PacI (3903)** **BspLU11I (3913)**
 AGGTTAAITTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACG

4001 AGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAAGCTCCCTCGTGCGCTCTCC

4101 TGTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTG

4201 **ApaLI (4227)**
 TAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAA

4301 GACACGACTTATCGCACTGGCAGCAGCCACTGGAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTA

4401 CGGTACTACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACACC

4501 GCTGGTAGCGGTGGTTTTTTTGGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTC

4601 **EagI (4663)** **PacI (4643)** **SwaI (4652)** **NotI (4662)**
 AGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTATTACATCTG

4701 TGTGTTGGTTTTTTGTGTGAATCGTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTG

4801 CAGGTGCCAGAACATTTCTCTATCGAA