



PvuI (7)
SgfI (6)
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACCGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

EcoO109I (566)
AgeI (552) **BspHI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCAccggtcatcATGAGGGTCTGAGCGCACGCTTTCCGGTGTCTACTGGC
1▶ M R V L S A R F R V L L A

BstBI (697)
601 CTGCTCGCCCTGGTGATCCCTGTCTCAGAGACAACTTCTTGCCAAAGAGCGTGCTTCAACAAGTCTGGTGAGGAAGCGCCGTGCAAAATACCTTGTTC
13▶ C L A L V I P V S E T N F L S K E R A S Q V L V R K R R A N T L F
701 GAAGAACTATGAAGGGCAACCTTGAACGAGAGTGCATTGAAGAACTCTGCAATAAGGAGGAAGCCAGGGAGGTCTTTGAAAATAATCCCGAGACGGATT
47▶ E E T M K G N L E R E C I E E L C N K E E A R E V F E N N P E T D
801 ATTTTTATCCAAAATATTTAGGTTGTCTGGGGCATTCCGTGTTGGCTCATTCCATGCTGCGAGGCAGTCAGTAATGCTTATCCTGACCTCAGAAGCTG
80▶ Y F Y P K Y L G C L G A F R V G S F H A A R Q S A N A Y P D L R S C

BsaBI (946)
901 TGTCAAAGCCATCTCAGACCAATGTGACCTATACCATGCAATGAAGTGGGTATCTGGCCTGCCAAGATGGCAAGCTGCTTTTACTTGCTTCTGTAAAG
113▶ V K A I S D Q C D P I P C N E D G Y L A C Q D G Q A A F T C F C K

PshAI (1015) **PstI (1071)**
1001 CCCGGCTGGCAAGGAGACAGGTGTCAGTATGATGTAATGAATGTAAGATCCCTCAAATGTCAATGGAGGCTGCAGCCAGATTTGTGACAACACTCCTG
147▶ P G W Q G D R C Y D V N E C K D P S N V N G G C S Q I C D N T P
1101 GAAGTTACCACTGCTCCTGTAAGAGGCTTTGCTATGCTCCCAAATAAGAAAGACTGCAAAGATTTGGATGAATGCCTCTAAAGCCAAGTGTCTGTGG
180▶ G S Y H C S C K R G F A M L P N K K D C K D L D E C A L K P S V C G

BstBI (1231)
1201 CACAGCTGTGTGCAAGAACATTCCAGGAGACTTCAATGTGAATGTCCCGACGGCTACCGATATGATCCCTCATCAAAATCTTGAAAGATGTTGATGAG
213▶ T A V C K N I P G D F E C E C P D G Y R Y D P S S K S C K D V D E

BspLU11I (1310) **XmnI (1371)**
1301 TGCTCTGAGAACATGTGTCTCAACTGTGTCAATTTCCCTGGAGGCTACTCTTGTACTGTGATGGGAAGAAAGGATTCAAACTTGCCCAAGATCAGA
247▶ C S E N M C A Q L C V N F P G G Y S C Y C D G K K G F K L A Q D Q
1401 AGAGTTGTGAGGGTATCCAGTGTGCTTTCTTGGACCTTGACAAAACTATGAATTATTATACTTGGCCGAGCAGTTTGCAGGAGTTGCTTATATCT
280▶ K S C E G I P V C L S L D L D K N Y E L L Y L A E Q F A G V V L Y L

EcoRV (1516) **NdeI (1553)**
1501 GAAATTCGATTGCCAGATATCACGAGGTTTTAGCTGAATTTGATTTTCGCACATATGATTCAGAGGGCATCATACTGTATGCAGAATCTCTCGACCAC
313▶ K F R L P D I T R F S A E F D F R T Y D S E G I I L Y A E S L D H

XcmI (1668)
1601 TCCAATGGCTCCTGATTGCGCTTCGTGATGGGAAGATTGAAGTTCAGTTTAAAGATGAGTTTTCGACCCAAATCACAACTGGAGGCAATGTTATTAACA
347▶ S N W L L I A L R D G K I E V Q F K N E F S T Q I T T G G N V I N
1701 ACGGTATATGGAATATGGTGTCTGTGGAAGAATTAGACGACAGTGTAGCATTAAAATAGCTAAGGAGGCCGTGATGAATATTAATAAACTTGGCAGCCT
380▶ N G I W N M V S V E E L D D S V S I K I A K E A V M N I N K L G S L
1801 TTTAAGCCTACCGATGGATTCTGGACACCAAAATATACTTCGACAGGCTTACCTCGGAAGGTGGAAGCGCACTCATTAAACCGATTAATCCTCGTCTG
413▶ F K P T D G F L D T K I Y F A G L P R K V E S A L I K P I N P R L

Bst1107I (1907)
1901 GATGGATGTATACGAGGCTGGAATCTGATGAAACAAGGAGCTTTAGTGCCAAGGAAATAATTGAAGGAAAACAAAATAAACACTGCTTCTCAATGTGG
447▶ D G C I R G W N L M K Q G A L G A K E I I E G K Q N K H C F L N V

BspEI (2023)
2001 AGAAGGGCTCCTACTACCTGTTCCGGAATTGCTCAGTTCAGCATAGACTACAATAATGTAATAATGCAGAGGGTGGCAAATGAATGTGACCTTGAA
480▶ E K G S Y Y P G S G I A Q F S I D Y N N V T N A E G W Q M N V T L N
2101 TATCCGCCCTTCACTGGCACTGGAGTCATGCTGGCTTTGGTTTCTGGGGCACAGTGCCCTTTGCCTTGTCTTGGTGGATTCTCGCTCTGGAACGCTCT
513▶ I R P S T G T G V M L A L V S G G T V P F A L S L V D S R S G T S

HpaI (2293)
2201 CAGGATATTGGTATTTGTTGAAAATTCAGTGGTGGCTCGATTGGAGCGGTATCTCTGTGCTCGGATCAGCAATCCCAACTGAAATGCAATGTTAAACA
547▶ Q D I V V F V E N S V V A R L E A V S L C S D Q Q S Q L K C N V N

BglIII (2352)
2301 GAAATGGACTGGAAGTGTGGACCCCACTTAGAAAAGATGTCATTTACTCTAAAGATCTTCAAAGGCAACTCGCCGTCTTGACAAAAGCAATGAAAAGAAC
580▶ R N G L E L W T P L R K D V I Y S K D L Q R Q L A V L D K A M K R T

BstXI (2405)
2401 CGTGGCCACTTACCTGGTGGCATCCAGATATTTCTTCACTGACACACAGTGAATGCCTTTTACAGTGGTGCATGGAAGTGAACATCAATGGGGTG
613▶ V A T Y L G G I P D I S F S A T P V N A F Y S G C M E V N I N G V

NheI (2595)

2501 CAGTTGGACCTGGATGAAGCCATTTCTAAACATAAGGACATTAGAGCTCACTCGTGCCCGTCAGTGAGGAAGATCCAGAAGAATTTTTAGACTCTGCTAG
647▶ Q L D L D E A I S K H K D I R A H S C P S V R K I Q K N F •

2601 CTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCT

HpaI (2733)

2701 TTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACAATTGCATTCATTTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTTAA

EcoRI (2829)

2801 GCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGG
2901 ATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATATAGTGATTTTTCCAA

SapI (3011) SwaI (3082)

3001 GGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAATAATTTAAATACATCATTGC

EcoO109I (3143)

3101 AATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTT

3201 TAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCAT
141◀ • N R T Y K L P I L E E I T T K V L K G N

BstXI (3372)

3301 TCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATC
120◀ 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 R D V E D
3401 AGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTG
87◀ 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 V T V R

StuI (3507)

3501 CCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGA
53◀ 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 Y L M T I

BbsI (3653) XmnI (3649)

3601 TCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCCTATAGTGAGTCGATTATACTATGCCGA
20◀ K E T A V E V L E L D Q Q S I N F T K M ◀

3701 TATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCTCCACC

SpeI (3870)

3801 TACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCA

SnaBI (3998)

3901 ATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATA

4001 CGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACT

NdeI (4103)

4101 TGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGA

PacI (4289) PstI (4282)

4201 ACATACGTCATTATTGACGTCAATGGGGGGGGTCTGTTGGGCGGTGAGCCAGCGGGCCATTTACCGTAAAGTTATGTAACGCTGCAGGTTAAATTAAGAA
SdaI (4281) BspLU11

4301 CATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTGCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCACAAAAAT

4401 CGACGCTCAAGTCAGAGTGGCGAAACCCGACAGGACTATAAGATACCAGGCTTTCCCGTGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGC

4501 CGTTACCGGATACCTGTCCGCTTTCTCCCTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTC

ApaLI (4613)

4601 CAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAAGTCCAACCCGTAAGACAGACTTATCG

4701 CCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAA

4801 GAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAACAAACCACCGCTGGTAGCGGTGG

4901 TTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGGTCTGACGCTCAGTGAACGAAAA

EagI (5049) PacI (5029) SwaI (5038) NotI (5048)

5001 TCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTT

5101 GTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCGAGTGCAAGTGCAGGTGCCAGAACA

5201 TTTCTCTATCGAA