



PvuI (7)
SgfI (6)
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCCGGTTGAGTCGGTCTGCGCCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

BstEII (555) **AgeI (552)** **NcoI (560)** **AvrII (585)**
501 TCTGTTCTGCCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGGAGACCCTGGACCTTCTCCTAGGAGTGGTGTCT

601 CATGGCCGGTCTGTGTTTGAATTCTTCTGCTCCTTTGATGGCCGAATAGCCTTTTATCGTTTCTGCAACCTCACCCAGGTCCCCAGGTCTCAAC
13▶ M A G P V F G I P S C S F D G R I A F Y R F C N L T Q V P Q V L N
701 ACCACTGAGAGGCTCCTGCTGAGCTTCAACTATATCAGGACAGTCACTGCTTCATCCTTCCCTTTTCTGGAACAGCTGAGCTGCTGGAGCTCGGGAGCC
47▶ T T E R L L L S F N Y I R T V T A S S F P F L E Q L Q L L E L G S

Bst1107I (801)
801 AGTATACCCCTTGACTATTGACAAGGAGGCCCTCAGAAAACCTGCCAACCTTAGAATCTTGACCTGGGAAGTAGTAAGATATACTTCTTGCATCCAGA
80▶ Q Y T P L T I D K E A F R N L P N L R I L D L G S S K I Y F L H P D
901 TGCTTTTCAGGGACTGTTCCATCTGTTTGAACCTTAGACTGTATTTCTGTGGTCTCTGATGCTGTATTGAAAGATGGTTATTTAGAAAATTTAAAGGCT
113▶ A F Q G L F H L F E L R L Y F C G L S D A V L K D G Y F R N L K A
1001 TTAACGCTTGGATCTATCCAAAATCAGATTCGTAGCCTTACCTTCATCCTTCATTTGGGAAGTTGAATTCCTTAAAGTCCATAGATTTTCTCTCCA
147▶ L T R L D L S K N Q I R S L Y L H P S F G K L N S L K S I D F S S

SspI (1104) **XhoI (1129)**
1101 ACCAAATTCCTTGTATGTGAACATGAGCTCGAGCCCTACAAGGGAAAACGCTCTCCTTTTTTAGCCTCGCAGCTAATAGCTTGTATAGCAGAGTCTC
180▶ N Q I F L V C E H E L E P L Q G K T L S F F S L A A N S L Y S R V S
1201 AGTGGACTGGGAAAATGTATGAACCCATTGAAAACATGGTCTGGAGATACTAGATGTTTCTGAAATGGCTGGACAGTGGACATCACAGGAACTTT
213▶ V D W G K C M N P F R N M V L E I L D V S G N G W T V D I T G N F
1301 AGCAATGCCATCAGAAAAGCCAGGCCCTTCTTTGATTCTTGCCACCACATCATGGGTGCCGGTTTGGCTCCATAACATCAAAGATCCTGACCAGA
247▶ S N A I S K S Q A F S L I L A H H I M G A G F G F H N I K D P D Q

MscI (1415) **BbsI (1459)**
1401 ACACATTTGCTGGCCGAGAAGTTCAGTGAGACACCTGGATCTTTCACATGGGTTTGTCTTCTCCCTGAACTCACGAGTCTTTGAGACACTCAAGGA
280▶ N T F A G L A R S S V R H L D L S H G F V F S L N S R V F E T L K D
1501 TTTGAAGTTCTGAACCTTGCCTACAACAAGATAAAATAAGATTGCAGATGAAGCATTTTACGGACTTGACAACCTCCAAGTCTCAATTTGTCATATAAC
313▶ L K V L N L A Y N K I N K I A D E A F Y G L D N L Q V L N L S Y N

BstBI (1620) **Bsu36I (1639)**
1601 CTTCTGGGGAACTTTACAGTTCGAATTTCTATGGACTACCTAAGGTAGCCTACATTGATTTGCAAAAAGATCACATTGCAATAAATTCAAGACCAAACAT
347▶ L L G E L Y S S N F Y G L P K V A Y I D L Q K N H I A I I Q D Q T

EcoRV (1780)
1701 TCAAATTCCTGAAAAATTACAGACCTTGATCTCCGAGACAATGCTCTTACAACCATTCAATTTATTCCAAGCATACCCGATATCTTCTGAGTGGCAA
380▶ F K F L E K L Q T L D L R D N A L T T I H F I P S I P D I F L S G N

SpeI (1803) **XbaI (1872)** **Acc65I (1899)**
1801 TAAACTAGTGACTTTGCCAAAGATCAACCTTACAGCGAACCTCATCCACTTATCAGAAAACAGGCTAGAAAATCTAGATATTCTACTTTTCTCTACGG
413▶ K L V T L P K I N L T A N L I H L S E N R L E N L D I L Y F L L R
1901 GTACCTCATCTCCAGATTCTCATTAAATCAAATCGCTTCTCCTCTGTAGTGGAGATCAAACCCCTTCCAGAGAATCCCAGCTTAGAACAGCTTTTCC
447▶ V P H L Q I L I L N Q N R F S S C S G D Q T P S E N P S L E Q L F
2001 TTGGAGAAAATATGTTGCAACTTGCTGGGAAACTGAGCTCTGTTGGGATGTTTTGAGGGACTTTCTCATCTCAAGTTCTGATTTGAATCATAACTA
480▶ L G E N M L Q L A W E T E L C W D V F E G L S H L Q V L Y L N H N Y
2101 TCTTAATTCCTTCCACCAGGAGATTTAGCCATCTGACTGCATTAAGGGGACTAAGCCTCAACTCCAACAGGCTGACAGTCTTTTCTCACAATGATTTA
513▶ L N S L P P G V F S H L T A L R G L S L N S N R L T V L S H N D L

DraIII (2270)
2201 CCTGCTAATTTAGAGATCTGGACATATCCAGGAACAGCTCCTAGCTCCTAATCCTGATGTATTTGTATCACTTAGTGTCTTGGATATAACTCATAACA
547▶ P A N L E I L D I S R N Q L L A P N P D V F V S L S V L D I T H N
2301 AGTTCATTTGTAATGTGAACCTTAGCACTTTTATCAATTGGCTTAATCACACCAATGTCACTATAGCTGGGCCCTCGACACATATATTGTGTGATCCC
580▶ K F I C E C E L S T F I N W L N H T N V T I A G P P A D I Y C V Y P
2401 TGACTCGCTCTCTGGGGTTCCCTCTTCTCTTTCCACGGAAGTGTGATGAAGAGGAAGTCTAAAGTCCCTAAAGTCTCCCTTTTCTCATTGATGC
613▶ D S L S G V S L F S L S T E G C D E E E V L K S L K F S L F I V C

BspHI (2522)
2501 ACTGCTACTCTGACTCTGTTCCCTCATGACCATCCTCACAGTCACAAAGTTCGGGGCTTCTGTTTTATCTGTTATAAGACAGCCAGAGACTGGTGTCA
647▶ T V T L T L F L M T I L T V T K F R G F C F I C Y K T A Q R L V F

MseI (2678)

BamHI (2635) **NheI (2672)**

2601 AGGACCATCCCCAGGGCACAGAACCTGATATGTACGGATCCTACCCCTATGATGTGCCAGACTACGCCATAAGCTAGCTGGCCAGACATGATAAGATACA
680▶ K D H P Q G T E P D M Y G S Y P Y D V P D Y A •

2701 TTGATGAGTTTGGACAAACCACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTG

HpaI (2810)

2801 CAATAAACCAAGTTAACAAACAACAAATTGCATTCATTTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGT

2901 GGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGG

SapI (3088)

3001 GGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTCTTCATTTCC

SspI (3145) SwaI (3159)

3101 TTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATT

3201 AGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAA

3301 AGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAG
141◀ • 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 C

BstXI (3449)

3401 TCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCA
112◀ 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 V

3501 CAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGAC
79◀ 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 V

3601 AGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACC
46◀ 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 V

BbsI (3730) AseI (3792)

3701 AGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTG
12◀ L E L D Q Q S I N F T K M

3801 TCAAACACAGCGTGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCG

SpeI (3947)

3901 TCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCC

SnaBI (4075)

4001 CCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCGCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCGCAAGTAGGA

NdeI (4180)

4101 AAGTCCATAAGTTCATGTAAGTGGGCATAATGCCAGCGGGCCATTACCCTGATGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA

4201 CTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAA

PacI (4366)

SdaI (4358) **BspLU11I (4376)**

4301 TGGGCGGGGTGCTTGGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAA
CCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAA

4401 AGGCCAGAACCGTAAAAAGGCCGCTTGTGGCTTTTTCCATAGGCTCCGCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCG

4501 AAACCCGACAGGACTATAAGATACCAGGCTTTCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGC

ApaLI (4690)

4601 TTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGTCCTCAAGCTGGGCTGTGTGCAGCAAC

4701 CCCCCGTTAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAA

4801 CAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCT

4901 CTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGCAAAACAAACACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGA

5001 TTACGCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTCTACGGGCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCA

EagI (5126)

PacI (5106) SwaI (5115) **NotI (5125)**

5101 GGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTCAATACATCTGTGTGTTGTTTTTTGTGTAATCGTAACATAACAG

5201 CTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA