



PvuI (7)
SgfI (6)
 1 GGATCTGGATCGCTCCGGTGCCTGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA
 101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGTCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **Bsu36I (291)**
 201 GTGAACGTTCTTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCCTTACGCGCCCGCCCTACCTGAGGGCC
 301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCCTCCCGCTGTGGTGCCTCCTGAAGCTCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **SphI (560)** **BstEII (576)** **XmaI (582)**
 501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTGACGATGCGGACGGCCGGGTGACCCCGGGCTGCGCGCGGG
 601 GCTACTCCTGCTGTTGCTGCGGTCCTTCCGGCTTGTGGAGCCTTCTGAGAGCTCAGGTAATGATCCATTACCATCGTCCATGAAAACACTGGCAAGTGC
 701 ATCCAGCCGCTGCTGACTGGGTAGTGGCCAGGACTGTAGCGGAATAACAACATGTTGGAAGTGGGTGCCAGCACCGCTCTTTACCTGGAAT
 801 CCCAGAAGTGCCTCGGCTCGATATTACAAAGCCAGGACAACCTGCGAATGTTGAGCTGTGACTCCACCGTCATGCTGTGGTGGAAATGTGAGCACCA
 901 TTCGCTGTACACCGCTGCCAGTACAGGCTAGCTCTGAAAGATGGATATGCCGTAGCCAATACGAATACATCTGATGTCTGGAAGAAGGGAGGCTCCGAG
 1001 GAAAACCTTTGTGCCAGCCTTATCATGAGATATACACAGAGATGGGAATTCCTACGGGAGACCTTGTGAATCCCTTTCTTATTGGTGGAGACATGGT
 1101 ACCATGACTGCATTATGATGAAGATCATAGTGGGCCATGGTGTGCCACTACCCTAAGTTATGAATATGATCAAAAGTGGGCATCTGCCTACTACCAGA
 1201 AAGTGGCTGTGAAGGTAAGTGGGAAAAGAAATGAGCAGATTGGAAGTTGCTACCAATTTAATAATCAGGAAATCTGTCTTGGAAAAGAGCTTATGTTTCC
 1301 TGTGAGAAACAAGGAGCTGACTTACTGAGCATCCACAGTGTGCCGAATTAGCCTACATTTACGGGAAAAGAGGACATTGCTAGACTTGTGGCTTGGAC
 1401 TGAATCAGCTCTATTCTGCGAGAGGTTGGGAATGGTCAGACTTCAGGCCACTCAAATTTCTTAAGTGGGATCCAGGCACGCGCTTGCACCTGTGATTGG
 1501 TGGTCAAGCTGTGCCAGAAATGGACACAGAGTCCGGGCTGTGGCAAAGTGTTCCTGTGAATCTCAGCAGCCTTACGCTGTGCAAGAAGCCACTGAACAAC
 1601 ACGCTGGAGCTCCAGATGTTTGGACTTACACAGATACCACTGCCATGTGGGCTGGCTGCCAAATAAGGGTTTGTCTATCTGCTGGCGAATGAAAGTA
 1701 GTTCTGGGATGCAGCACATTTGAAATGCAAAGCCTTCGGTGCAGACCTCATCAGCATGCACCTCTTAGCAGATGTGGAGGTGGTTGTACGAAAACCTCA
 1801 TAATGGGGATGTCAAAAAAGAAATATGGACAGGCTTAAAAACACAAACAGCCCTGCTTTGTTCCAGTGGTCCGACGGAACGGAAAGTTACTCTAACGTAC
 1901 TGGAAATGAGAATGAGCCGAGTGTCCCTTCAACAGLACTCCCACTGTGTTTCTATTTAGGAAAGTGGTCAAGTGGAAAGTCCAGTCTGTGAGAAGA
 2001 AACTCAGATATGTATGCAAGAAAAGGGAGAAATAACTAAGGATGCAGAGTCCGATAAGCTGTGTCGCCAGACGAGGGCTGGAAGAGACATGGAGAAC
 2101 CTGTTACAAGATTTATGAGAAAAGGGCCCTTTCCGAAACGAACTGCAACCTGACCATCACTAGCAGGTTCCGAGCAGGAATTTGAAATATATGATGAAG
 2201 AACTATGATAAGTCCCTTCGGAAGTACTTCTGGACTGGCTGAGAGACCTGACTCTCGAGGAGAATACAGTTGGGCCGTTGCTCAGGGAGTAAAGCAGG
 2301 CTGTGACCTTTTCCAAGTGGAAATTTCTTGAACCGCGCTCCAGGCGGGTGGTGGCTATGTCTACTGGAAGACTCTTGGCAAGTGGGAAGTGAAGAA
 2401 CTGAGAAGCTTCCGTGCTCTTTCAATATGCAAGAAAAGTGAAGCAACCCAGGAGCCTGAAGAAGCAGCCCCAAGCCCGACGACCCCTGTCTGAAGGC
 2501 TGGCACACTTTCCCTCCAGCTTTCTGTTATAAGGTGTTCCATATAGAAAAGTGTAAAGAAAGAGGAACTGGGAAGAAAGCCGAAAGTTCTGCCAAG
 2601 CCCTTGGAGCTCACCTACCCAGCTTCAGTCGTAGAGAGGAAATTAAGGACTTTGTGCATTTGTTAAAGGACCAGTTTCAAGTGGGACGCTTGGTGTGGAT
 2701 TGGTCTGAATAAGAGAAGCCCTGATTTACAAGGCTCCTGGCAGTGGAGTGACCGACACCAGTGTCTGCTGTGATGATGGAGCCGGAGTTTCAACAGGAT
 2801 TTTGACATCAGAGACTGTGCTGCATCAAGGCTCCTTGTGATGACTTGGCGAAGAGTCTGGCATCTATGAGGACAAGGACTATGCTTCAAGGAACTT
 2901 TTGCTTGTGATGCCAAGCTTGTGGTGTGCCAGATTCAAAAGGTAGCACTCCCGAGATGCCAGACTGGTATAATCCAGAGCGCACTGGAATTCATGG
 3001 F A C D A K L E W V C Q I P K G S T P Q M P D W Y N P E R T G I H G

3001 GCCCCAGTTATAATGAAGGAAGTGAATACTGGTTTTGTTGCTGATCCCCACTTAACTACGAAGAAGCCGTCTTATACTGTGCTAGCAATCACAGCTTT
813> P P V I I E G S E Y W F V A D P H L N Y E E A V L Y C A S N H S F
3101 CTTGCCACGATAACATCGTTTACAGGACTAAAAGCTATCAAAAACAAACTAGCAAATATTTCTGGCGAGGAACAGAAGTGGTGGGTGAAAACGAGTGAGA
847> L A T I T S F T G L K A I K N K L A N I S G E E Q K W W V K T S E
3201 ATCCAATTGATCGTTACTTTCTAGGCTCGCGCCGCCCTGTGGCACCATTTCCCATGACGTTTGGAGATGAATGTTTGACATGTCAGCCAAGACGTG
880> N P I D R Y F L G S R R R L W H H F P M T F G D E C L H M S A K T W

BsrBI (3320)

3301 GCTTGTGACTTAAGTAAACGAGCGGACTGTAATGCCAAGTTGCCCTTCTCATCTGTGAAAGATACAATGTCTCTTATTAGAGAAATACAGCCCAGATCCT
913> L V D L S K R A D C N A K L P F I C E R Y N V S S L E K Y S P D P

ApaLI (3414)

Bsp120I (3469)

3401 GCAGCCAAAGTACAGTGCATGAGAAGTGGATTCTTTTCAAATAAGTGTCTTAAAGGTCAACTCTGGGCCCGTTACGTTTTCTCAAGCAAGCGGCA
947> A A K V Q C T E K W I P F Q N K C F L K V N S G P V T F S Q A S G

3501 TTTGTCATTCTACGCGGCACCCTTCTTCCGTGCTGAGCCGGGTGAACAAGATTTTATTATATCCTTGTCTTCTGAAATGGAAGCTAGTCTATGGAT
980> I C H S Y G G T L P S V L S R G E Q D F I I S L L P E M E A S L W I

3601 TGGTCTGCGCTGGACTGCCTACGAAAGGATAAAACAGATGGACAGACAACAGAGAGCTGACCTACAGCAACTTTTACCCACTGCTGGTCCGGTCCGAGGCTG
1013> G L R W T A Y E R I N R W T D N R E L T Y S N F H P L L V G R R L

3701 AGCATACCAACGAATTTCTTGTGATGAGTCCCACTTCCACTGCGCTTATTCTTAACTCAAAAAGTCCCGCTTACTGGGAAATTTTACTT
1047> S I P T N T F F D D E S H F H C A L I L N L K K S P L T T G T W N F T

3801 CCTGTTGAGAAGCAGACTCTCTGTCTCTGTCAAAAATACTCAGAGACTGAAGACGGACAGCCCTGGGAGAACAACCTTCAAAAACAGTGAAGTATCTAAA
1080> S C S E R H S L S L C Q K Y S E T E D G Q P W E N T S K T V K Y L N

3901 TAACCTATACAAAATCATCTCGAAGCCCTGACGTGGCAGCGGCTCTGAAGGAGTGCATGAAAGAGAAGATGAGGTTGGTGAGCATCACAGACCCTTAC
1113> N L Y K I I S K P L T W H G A L K E C M K E K M R L V S I T D P Y

FspI (4031)

4001 CAGCAGGCCCTTCTCGCAGTGCAGGCCACCCTGCGCAACAGCTCTTCTGGATCGGACTCTCCAGTCAAGATGATGAACCTCAACTTTGGTTGGTCAGATG
1147> Q Q A F L A V Q A T L R N S S F W I G L S S Q D D E L N F G W S D

4101 GGAACAGTCTTCAATTTAGTAACTGGGCTGGAAGCAATGAGCAACTTGTGACTGCGTGATATTAGACACAGATGGATTCTGGAAAACAGTGAACCTGTGA
1180> G K R L Q F S N W A G S N E Q L D D C V I L D T D G F W K T A D C D

KasI (4213)

BsrGI (4290)

4201 TGATAACACAGCCTGGCGCATTGCTACTATCCAGGAAATGAGACTGAGGAGGAGTCCAGAGCTGGACACTGCTAAATGCCCGTCTCTGTACAGAGC
1213> D N Q P G A I C Y Y P G N E T E E E V R A L D T A K C P S P V Q S

BbrPI (4389)

4301 ACCCATGGATACCATTCCAGAACTCTGCTACAATTTTATGATTACCAACAACAGGCATAAGACAGTACACCCGGAGGAAGTGCAGTCCACGTGCGAGA
1247> T P W I P F Q N S C Y N F M I T N N R H K T V T P E E V Q S T C E

BstBI (4407)

4401 AGCTGCATTGAAAGCACACAGTCTGAGCATTCCGAATGAGGAGGAGAATAACCTTTGTTGGAACAGCTTCTGTACTTCAATTATATTGCCATCGGTT
1280> K L H S K A H S L S I R N E E E N T F V V E Q L L Y F N Y I A S W V

4501 CATGTTAGGAATAACCTATGAAAACAATTTTGTGATGTGGTTTGATAAACTGCATTGTCTACACACTGGAGAACGGGAAGCAACTGTGAAAAT
1313> M L G I T Y E N N S L M W F D K T A L S Y T H W R T G R P T V K N

ScaI (4621)

4601 GGCAAATTTTGGCTGGTCTAAGTACTGATGGATTCTGGGATATTGAGTCTTTCAATGTTATTGAAGAAACACTTCAATTTTACCAGCACAGTATTTCTG
1347> G K F L A G L S T D G F W D I Q S F N V I E E T L H F Y Q H S I S

4701 CTTGTAATTTGAAATGGTTGACTATGAGGACAAACACAATGGCACCTGCCACAGTTCATCCATATAAGGACGGCGTCTACAGCGTTATTGAGAAGAA
1380> A C K I E M V D Y E D K H N G T L P Q F I P Y K D G V Y S V I Q K K

MluI (4823)

MscI (4850)

4801 GGTGACGTGGTATGAAGCATTGAACGCTGCTCTCAAAGTGGGGAGAGTTGGCAGTGTTCACAACCCAAATGGGAAGCTCTTTCTGGAAGACATTGTG
1413> V T W Y E A L N A C S Q S G G E L A S V H N P N G K L F L E D I V

BstBI (4960)

4901 AACCGTGACGGATTCCCTCTCTGGGTTGGGCTCTCAAGTCATGATGGAAGCGAATCGAGTTTTCGAATGGTCCGATGGCAGAGCATTGACTATGTCCCAT
1447> N R D G F P L W V G L S S H D G S E S S F E W S D G R A F D Y V P

5001 GGCAGAGCCTACAATCTCCCGAGACTGTGCTGCTTATATCCAAAAGAAATTTGGAGACGTGAAAAATGCCTGTCTGTTAAGGATGGTGTCTATTGTTA
1480> W Q S L Q S P G D C V V L Y P K G I W R R E K C L S V K D G A I C Y

5101 CAAGCCTACAAAAGATAAAAAGCTGATCTTTCATGTAATAATCATAAAATGTCCAGTGGCAAAGAGGGATGGTCCCAGTGGGTCAGTATGGGGGCCAC
1513> K P T K D K K L I F H V K S S K C P V A K R D G P Q W V Q Y G G H

5201 TGTACGCTTCGGACCAGTACTGCACAGCTTCTCAGAGGCCAAACAAGTGTGTAAGAGCTTGTGATCATTCCGCAACTGTTGTACCATAGCAGATGAAA
1547> C Y A S D Q V L H S F S E A K Q V C Q E L D H S A T V V T I A D E

5301 ATGAGAATAAGTTTGTGAGCAGACTGATGAGGGAGAATAATAATTAATGATGAGAGTTTGGCTTGGCCTGTCTCAGCATTCACTCGATCAGTCTTGGAG
1580> N E N K F V S R L M R E N Y N I T M R V W L G L S Q H S L D Q S W S

PshAI (5421)

5401 TTGGCTCGATGGATTAGATGTGACATTTGTCAAATGGGAAAAATAAACTAAGGATGGTGTAGGGAAATGTAGCATTTTAAATAGCTTCAAATGAAACCTGG
1613> W L D G L D V T F V K W E N K T K D G D G K C S I L I A S N E T W

BbrPI (5516)

5501 AGAAAAGTCCATTGCTACAGTGGCTATGCAAGAGCTGTCTGCAAAATTCCTCTGAGCCCGGACTACACAGGCATAGCCATCCTGTTTGGCGTGTGTGCC
1647> R K V H C S R G Y A R A V C K I P L S P D Y T G I A I L F A V L C

5601 TCTTAGGGCTCATCAGTTGGCATTGTTCTCTTGAACGATCCCATATCCGCTGGACCGCTTCTCCTCGTTCCGGTATGAACATGGAACCAACGA
1680> L L G L I S L A C I W F L L Q R S H I R W T G F S S V R Y E H G T N E

AvrII (5734)

MscI (5746)

5701 AGACGAGGTGATGCTCCCTTCTTCCACGACTAACCTAGGCTTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAACCCACAACCTAGAATG
1713> D E V M L P S F H D .

HpaI (5878)

5801 CAGTGAACCAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAAACAACATTCATTC
5901 ATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAAAATACAGCATAGCAAAA

6001 CTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAG

