



PvuI (7)
SgfI (6)
 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

 101 GAGAAAGTGGCGGGGTAACGGAAAGTGTGTCTGTACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

 301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)**
 501 TCTGTTTGTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTAAGCTGAGATCACCGGTATCATGAGCGCCCTACTACCGCAGCGGGTTGCTGTTCCCT

 601 GGGGATGCTTCAAGCCTTCCCAACGGATCGACCACTCAAGACCACCTGTGCCGGAGACCTCAGCCACTACCCAGGGGAGGCTGCCAGGAACTGCTGTTAC
 13> G M L Q A F P T D R P L K T T C A G D L S H Y P G E A A R N C C Y
 1 M S A L L T A A G L L F L
PstI (753) **BbsI (790)**
 701 CAGTGCCCTCAGGGTTGTCTCCGACACAGCCATGCCACGGGGTCTGCCCAAGCAGTGTGCACCTGACTACTAGTCAATGAAGACGGGA
 47> Q C P S G L S P T Q P C P R G P A H C R K Q C A P D Y Y V N E D G
SphI (890) **BstAPI (890)**
 801 AGTGCACAGCCTCGTGACCTGTTTGCCAGGCCTGTGGAGAAGGCTCCGTGTTCCGGAACTCTCCTCGAATCTGTGAGTGTGACCGCTGGCATGCACTG
 80> K C T A C V T C L P G L V E K A P C S G N S P R I C E C Q P G M H C
 901 CTGCACACCAGCAGTCAATTCCTGCGCCCGCTGCAAACTCCACTGTTCTGGAGAGGAGTTGTCAAGTCTCCAGGCACAGCAAAGAAGGACACTATCTGT
 113> C T P A V N S C A R C K L H C S G E E V V K S P G T A K K D T I C
BstEII (1042) **XbaI (1092)**
 1001 GAGCTGCCTTCTCGGGATCTGGTCCCAATTGCTCCAATCCGGGTGACCGCAAGACACTACTAGCCATGCCACTCCTCAGGCCATGCCACTACTAGAAT
 147> E L P S S G S G P N C S N P G D R K T L T S H A T P Q A M P T L E
 1101 CCCAGCCAATGACAGTGAAGGAGCTTGTGCCAATCGGTGTACCAACCTTGTGCAGGAAGATGCTACTGAGTTGGTGAAGTTCCAGAATCTTCCTC
 180> S P A N D S A R S L L P M R V T N L V Q E D A T E L V K V P E S S S
 1201 GTCCAAGCAAGGAGCCAGTCCAGTCCAGTAAATGCAGAGAAGAATGACCTTGGAGCTTCCATCTCCAGGGACACTCCCTGACATCAGCAGCTCA
 213> S K A R E P S P D P G N A E K N M T L E L P S P G T L P D I S T S
 1301 GAAAACAGCAAGGAGCCTGCAAGTACCGCCTCCACCCTAAGCCTTGTGGTAGATGCCTGGACCAGCAGGAGTGCAGCCACCTCTCCATTGTCACGG
 247> E N S K E P A S T A S T L S L V V D A W T S S R M Q P T S P L S T
Bsp120I (1420) **NcoI (1442)**
 1401 GAACACCATTTCTGGATCCAGGGCCCGTCTTCTGGGTGGCCATGGTGGTCTACTGGTTGGCTCCGGCTCCTTTCTCCTGTGTTACTGGAAGGCCTG
 280> G T P F L D P G P V L F W V A M V V L L V G S G S F L L C Y W K A C
BamHI (1413) **SapI (1428)** **MscI (1439)**
 1501 TAGGAGGCGGTTCCAGCAGAAGTTTACCTGGACTACCTAGTGCAGACCTTCCAGCCCAAGATGGAGCAGACAGATTCTGTCTACTGAAAAGCTAACCC
 313> R R R F Q Q K F H L D Y L V Q T F Q P K M E Q T D S C P T E K L T
 1601 CAGCCACAGAGAAGCGGTGCTGGTACAGATCCAGCAGCAGGACCAAGTTGAGCCAGTGAAGCCCTCCTCAGCTGTAGAGACTTGTGCCAGTGTGGGG
 347> Q P Q R S G S V T D P S T G H K L S P V S P P P A V E T C A S V G
XmaI (1778)
 1701 CCACCTACTGGAGAACCTGCCGCTGCTGGATGACAGCCAGCTGGGAATCCTTTTCTCCAGGGAACTCCAGAGCCCGGGTATCCACGGAACACAC
 380> A T Y L E N L P L L D D S P A G N P F S P R E P P E P R V S T E H T
BspHI (1826)
 1801 CAATAACAGGATTGAGAAAATCTACATCATGAAGGCCGACACAGTGTCTGGGCTCTGTAAAACTGAAGTCCCTGAGGGCCGGGCTCCAGCAGGGTCT
 413> N N R I E K I Y I M K A D T V I V G S V K T E V P E G R A P A G S
 1901 ACAGAGTCTGAGTTGGAAGCTGAAGTGGACCATGCCCCCATACCCGGAGCAGGAGACAGAACCACCTCTGGGCAGCTGCACTGAGGTCATGT
 447> T E S E L E A E L E V D H A P H Y P E Q E T E P P L G S C T E V M
Bsp120I (2032) **MscI (2077)**
 2001 TCTCGGTGGAGGAAGGAGGAAAAGAGGACCATGGGCCACGACTGTCTCTGAGAAGTGAACAACCATTTAGCTAGCTGGCCAGACATGATAAGATACAT
 480> F S V E E G G K E D H G P T T V S E K •
NcoI (2028) **NheI (2071)**
 2101 TGATGAGTTTGGACAAACCACAACCTAGAACTGAGTAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGC

HpaI (2209)
 2201 AATAACAAGTTAAACAACAATTGCATTCTTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTG

EcoRI (2305)
 2301 GTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTGAACTCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGG

SapI (2487)
 2401 GCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACTGCTTCTTCAATTTCT

SspI (2544) **Swal (2558)**
 2501 TTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTA

 2601 GGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTTGACAGCAAGAAA

2701 GCGAGCTTCTAGCTTTAGTTCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGT
 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 D

2801 CAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCAC
 112 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

2901 AATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACA
 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

3001 GCAGAGATGATCTCCCAGTCTTGGTCTGTATGGCCGCCCGACATGGTGCTTGTCTCTATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCA
 45 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 L

BbsI (3129)
XmnI (3125) **AseI (3191)**

3101 GCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGT
 12 E L D Q Q S I N F T K M

SacI (3248)

3201 CAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTGCGT

SpeI (3346)

3301 CAATGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCC

SnaBI (3474)

3401 CGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAA

NdeI (3579)

3501 AGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTAC

3601 TGCCAAGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAAT

PacI (3765)
 PstI (3758)
SdaI (3757) **BspLU11I (3775)**

3701 GGGCGGGGTCGTTGGCGGTGACCCAGCGGGCCATTTACCGTAAGTTATGTAAACGCTGCAGGTTAATTAAAGAACATGTGAGCAAAAGGCCAGCAAAA

3801 GGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGA

3901 AACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCT

4001 TTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCAAGCTGGGCTGTGTGCACGAACC

4101 CCCCCTTCAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAAC

4201 AGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTC

4301 TGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTGTGTTGAAGCAGCAGAT

4401 TACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATG

EagI (4525)
 PacI (4505) SwaI (4514) **NotI (4524)**

4501 GCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTTGTGTAATCGTAACATAACATACGC

4601 TCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA