



PvuI (7) SgfI (6) MfeI (82)
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTCCGCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

KasI (535) AgeI (552) SphI (560)
501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTA CTTGAGATCACCGGTGACAGTCCAGGGAGCCCGACCCGACGAGCGAGAC
601 CATGTGGGTCCTGATGAGCTGGCTGGCCTTCGCGGCAGGGCTGGTAGCCGGAACACAGTGTCCAGATGGGCAGTTCTGCCTGTGCCTGCTGCCTTGAC
13 M W V L M S W L A F A A G L V A G T Q C P D G Q F C P V A C C L D
1 M P P R E P G P R R R Q T

XbaI (768) MscI (792) XcmI (762) NcoI (789)
701 CAGGGAGGAGCCAACCTACAGCTGCTGTAACCTCTTCTGGACACATGGCCTAGAATAACGAGCCATCATCTAGATGGCTCCTGCCAGACCCATGGCCACT
47 Q G G A N Y S C C N P L L D T W P R I T S H H L D G S C Q T H G H
801 GTCCTGCTGGCTATTCTTGTCTTCTCACTGTGTCTGGACTTCCAGCTGCTGCCGTTCTCTAAGGGTGTGTCTTGTGGTGATGGCTACCACTGCTGCC
80 C P A G Y S C L L T V S G T S S C C P F S K G V S C G D G Y H C C P
901 CCAGGGCTTCCACTGTAGTGCAGATGGGAAATCCTGCTTCCAGATGTCAGATAACCCCTTGGGTGCTGTCCAGTGTCCGGAGCCAGTTTGAATGTCCT
113 Q G F H C S A D G K S C F Q M S D N P L G A V Q C P G S Q F E C P

StuI (1058) NcoI (1095)
1001 GACTCTGCCACCTGCTGCATTATGGTTGATGGTTCGTGGGGATGTTGCCATGCCCCAGGCCCTCTTGTGTGAAGACAGAGTGCATTGCTGTCCCCATG
147 D S A T C C I M V D G S W G C C P M P Q A S C C E D R V H C C P H
1101 GGGCTCCTGTGACTGTGTTACACACGATGCGTTTACCACAGGGCACCCACCCCTACTAAAGAAGTCCCTGCACAAAAGACCAACAGGGCAGTGTG
180 G A S C D L V H T R C V S P T G T H T L L K K F P A Q K T N R A V S
1201 TTTGCTTTTTTCTGTCGTGCTGCTGATGCTAAGACCCAGTGTCCCGATGTTACTTACCTGCTGTGAGCTACCCACTGGGAAGTATGGCTGTGCTCCAATG
213 L P F S V V C P D A K T Q C P D D S T C C E L P T G K Y G C C P M
1301 CCCAATGCCATCTGCTGTTCGACCACCTGCACTGTGCCCCAGGACACTGTATGTGACCTGATCCAGAGTAAGTGCCTATCCAAGAAGTACACACGG
247 P N A I C C S D H L H C C P Q D T V C D L I Q S K C L S K N Y T T
1401 ATCTCCTGACCAAGCTGCCTGGATACCCAGTGAAGGAGGTGAAGTGGACATGGAGGTGAGCTGCCCTGAAGGATATACCTGCTGCCGCTCAACACTGG
280 D L L T K L P V G Y P V K E V K C D M E V S C P E G Y T C C R L N T G
1501 GGCCTGGGGCTGCTGTCCATTGGCAAGGCCGTGTGTTGTGAGGATCACATTCATTGTGCTGCCCGCAGGGTTTCAAGTGTACACAGAGAAAGGAACTGC
313 A W G C C P F A K A V C C E D H I H C C P A G F Q C H T E K G T C

BglII (1667) DraIII (1685)
1601 GAAATGGGTATCCTCCAAGTACCCTGGATGAAGAAGGTATAGCCCCCTCCGCTGCCAGACCCACAGATCTTGAAGAGTGATACACCTTGTGATGACT
347 E M G I L Q V P W M K K V I A P L R L P D P Q I L K S D T P C D D
DraIII (1701)
1701 TCACTAGGTGCTCTACAAAACAATACCTGCTGCAAACTCAATTCTGGGGACTGGGGCTGTGTCCATCCAGAGGCTGTCTGCTGCTCAGACAACAGCA
380 F T R C P T N N T C C K L N S G D W G C C P I P E A V C C S D N Q H
1801 TTGCTCCCTCAGGGCTTCACTGTCTGGCTCAGGGTACTGTGAGAGGGAGACACAATGGTGGCTGGCCTGGAGAAGATACCTGCCCGCAGACAACC
413 C C P Q G F T C L A Q G Y C Q K G D T M V A G L E K I P A R Q T T

BsrBI (1900) EcoRV (1915)
1901 CCGCTCCAAATTGGAGATATCGTTGTGACCAGCATACAGCTGCCAGTAGGGCAAACCTGTGCCAAAGCCTCAAGGGAAGTTGGGCTGCTGCCAGC
447 P L Q I G D I G C D Q H T S C P V G Q T C C P S L K G S W A C C Q

EagI (2042) SalI (2089)
2001 TGCCCATGCTGTGTGCTGTGAGGACCGGCAGCACTGTGCCGCGGGTACACCTGCAACGTGAAGGCAGGACCTGTGAGAAGGATGTGACATTTAT
480 L P H A V C C E D R Q H C C P A G Y T C N V K A R T C E K D V D F I
2101 CCAGCCTCCCGTGTCTGACCCCTCGGCCCTAAGGTTGGGAATGTGGAGTGTGGAGAAGGGCATTCTGCCATGATAACCAGACCTGTTGTAAGACAGT
513 Q P P V L L T L G P K V G N V E C G E G H F C H D N Q T C C K D S
2201 GCAGGAGTCTGGGCTGCTGCTTAAAGGGTGTGCTGTAGAGATGGACGCTACTGTTGCCCGGTGGCTTCCACTGTTAGCCAGGGGAACCA
547 A G V W A C C P Y L K G V C C R D G R H C C P G G F H C S A R G T

BamHI (2343) NheI (2377)
2301 AGTGTTCGAAAGAAGATTCTCGCTGGGACATGTTTTGAGGATCCGGTCCCAAGCCGCTACTGTAAGGAAGGGTAGCTGGCCAGACATGATAAG
580 K C L R K K I P R W D M F L R D P V P R P L L •
2401 ATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATA

HpaI (2515) MfeI (2526)
2501 AGCTGCAATAAACAGTTAAACAACAATTGCATTATTTATGTTTCAGGTTACAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAACCTCTACA

EcoRI (2611)
2601 AATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTAACTCCAATCAAGCCTTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCA
2701 TCAGGGCTGTTGCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACCTCTTC

2801 **SspI (2850)** **SwaI (2864)**
 ATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTT

2901 TTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGC

3001 AAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAA
 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

3101 **SacI (3125)**
 AGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGAC
 114 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 S Y P H R V

3201 **StuI (3289)**
 AGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCTGCCAATGTAGGCCTCAATG
 81 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 G I Y A E I

3301 TGGACAGCAGAGATGATCTCCCCAGTCTTGGCTCTGATGGCCGCCGACATGGTCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCT
 47 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 K E T A V E

3401 **XmnI (3431)** **AseI (3497)**
 CCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCTATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATT
 14 V L E L D Q Q S I N F T K M

3501 **SacI (3554)**
 AATTGTCAAACACGCGTGGATGGCGTCTCCAGCTTATCTGACGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCCAT

3601 **SpeI (3652)**
 TTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGAGACTTGA

3701 **SnaBI (3780)**
 AATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAG

3801 **NdeI (3885)**
 TAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTG

3901 ATGTACTGCCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGAC

4001 **PacI (4071)** **PstI (4064)** **SdaI (4063)**
 GTCAATGGGCGGGGTCGTTGGGCGTCAAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAAATTAAGAACATGTGAGCAAAAGGCCA

4101 GCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGG

4201 TGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGT

4301 **ApaLI (4395)**
 CCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGATAGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCA

4401 CGAACCCCCGTTTACGCCGACCGCTGCGCCTTATCCGTAACATATCGTCTTGTAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACT

4501 GGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCT

4601 GCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGGCAAACAACACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCA

4701 GCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGGATTTTG

4801 **PacI (4811)** **SwaI (4820)** **EagI (4831)** **NotI (4830)**
 GTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTGTGTAATCGTAACTAAC

4901 ATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA