



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGGGGTAAGTGGAAAGTGATGTCGTGTAAGTGGTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) EcoNI (287)
 201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCCGGTTGAGTTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NcoI (560) BstEII (555) EcoO109I (572)
 AgeI (552) Tth111I (568)
 501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCCCTACCTGAGATCACCGGTACCATTGGCCGACAAGTCCCTGAAGGAGAAGAAAGCTGTT
 1 M A D K V L K E K R K L F

NcoI (608)
 601 TATCCGTTCCATGGGTGAAGGTACAATAAATGGCTTACTGGATGAATTATTACAGACAAGGGTCTGAACAAGGAAGAGATGGAGAAAGTAAACGTGAA
 13 I R S M G E G T I N G L L D E L L Q T R V L N K E E M E K V K R E

SphI (763)
 701 AATGCTACAGTTATGGATAAGACCCGAGCTTTGATTGACTCCGTTATTCCGAAAGGGGCACAGGCATGCCAAATTTGCATCACATACATTTGTGAAGAAG
 47 N A T V M D K T R A L I D S V I P K G A Q A C Q I C I T Y I C E E

ScaI (879)
 801 ACAGTTACCTGGCAGGGACGCTGGGACTCTCAGCAGATCAAACATCTGAAAATTACCTTAATATGCAAGACTCTCAAGGAGTACTTTCTTCTTTCCAGC
 80 D S Y L A G T L G L S A D Q T S G N Y L N M Q D S Q G V L S S F P A

HindIII (961)
 901 TCCTCAGGCAGTGCAGGACAACCAGCTATGCCACATCCTCAGGCTCAGAAGGGAATGTCAAGCTTTGCTCCCTAGAAGAAGCTCAAAGGATATGGAAA
 113 P Q A V Q D N P A M P T S S G S E G N V K L C S L E E A Q R I W K
 1001 CAAAAGTCGGCAGAGATTTATCCAATAATGGACAAGTCAAGCCGCACACGCTTGTCTCATTATCTGCAATGAAGAATTTGACAGTATTCCTAGAAGAA
 147 Q K S A E I Y P I M D K S S R T R L A L I C N E E F D S I P R R
 1101 CTGGAGCTGAGTTGACATCACAGGCATGACAATGCTGCTACAAAATCTGGGGTACAGCGTAGATGTGAAAAAATCTCACTGCTTCGGACATGACTAC
 180 T G A E V D I T G M T M L L Q N L G Y S V D V K K N L T A S D M T T
 1201 AGAGCTGGAGGCATTTGCACACCCGAGAGCACAAGACCTCTGACAGCAGTTCCTGGTGTTCATGTCTCATGGTATTCCGGGAGGCATTTGTGGGAAG
 213 E L E A F A H R P E H K T S D S T F L V F M S H G I R E G I C G K

BspLU11I (1349) BsaBI (1398)
 1301 AAACACTCTGAGCAAGTCCCAGATATACTACAACCTCAATGCAATCTTTAACATGTTGAATACCAAGAACTGCCCAAGTTTGAAGGACAAAACCGAAGGTGA
 247 K H S E Q V P D I L Q L N A I F N M L N T K N C P S L K D K P K V

StuI (1409)
 XcmI (1407)
 1401 TCATCATCCAGGCCTGCCGTGGTACAGCCCTGGTGTGGTGTGGTTTAAAGATTCAAGTAGGAGTTTCTGGAAACCTATCTTTACCAACTACAGAAGAGTT
 280 I I I Q A C R G D S P G V V W F K D S V G V S G N L S L P T T E E F

SapI (1553)
 1501 TGAGGATGATGCTATTAAGAAAGCCACATAGAGAAGGATTTTATCGCTTTCTGCTCTCCACACCAGATAATGTTTCTGGAGACATCCCAATGGGC
 313 E D D A I K K A H I E K D F I A F C S S T P D N V S W R H P T M G

NdeI (1627)
 1601 TCTGTTTTATTGGAAGACTCATTGAACATATGCAAGAATATGCCTGTTCTGTGATGTGGAGGAAATTTCCGCAAGTTTCGATTTTCAATTTGAGCAGC
 347 S V F I G R L I E H M Q E Y A C S C D V E E I F R K V R F S F E Q
 1701 CAGATGGTAGAGCGCAGATGCCACCCTGAAAGAGTGACTTTGACAAGATGTTTCTACCTCTTCCAGGACATTAATAAAGGAACTGTATGAATGTC
 380 P D G R A Q M P T T E R V T L T R C F Y L F P G H •

MscI (1815)
 NheI (1809)
 1801 TGTGGGCTGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT

HpaI (1947) MfeI (1958)
 1901 GTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGTTAACAACAACAATTGCATTCATTTATGTTTCAGGTTCAAGGGGAGGTGTG

EcoRI (2043)
 2001 GGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACTCCAAATCAAGCCTCTACTTGAA
 2101 TCCTTTTCTGAGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATA

SapI (2225) SspI (2282) SmaI (2296)
 2201 GTGTATTTTCCCAAGTTTGAACAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATCCCTTTTATAGTAAAAATATTCAGAAATAATTT

EcoO109I (2357)
 2301 AAATACATCATTGCAATGAAAAATAATGTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGG
 2401 AACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTCTGCTGTAAGTGGAGGGGATGAGTTCCTCAATGTTGTTTTT
 141 • N R T Y K L P I L E E I T T K

2501 GACCAGTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGAT
 125 V L K G N 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
 2601 CTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCAC
 91 R D V E D 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
 StuI (2721)
 2701 AGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGTATGGCCGCCCCGACATGGTGCTTGTGTCCTC
 58 V T V R 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
 XmnI (2863)
 2801 ATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTA
 25 Y L M T I K E T A V E V L E L D Q Q S I N F T K M
 AseI (2929) SacI (2986)
 2901 TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATA
 SpeI (3084)
 3001 TAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCCCGTTGATTTACTAGTCAAAAACAAC
 3101 TCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT
 SnaBI (3212)
 3201 AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCA
 NdeI (3317)
 3301 ATAGGGGGCGTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAAGTCCCTATTG
 PstI (3496)
 SdaI (3495)
 3401 GCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGC
 PacI (3503) BspLUIII (3513)
 3501 AGGTTAATTAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACG
 3601 AGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGGCTCTCC
 3701 TGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTG
 ApaLI (3827)
 3801 TAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAA
 3901 GACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTA
 4001 CGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACC
 4101 GCTGGTAGCGGTGGTTTTTTTGGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTC
 EagI (4263)
 PacI (4243) SwaI (4252) NotI (4262)
 4201 AGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTG
 4301 TGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTG
 4401 CAGGTGCCAGAACATTTCTATCGAA