



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82)

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGTCAAGTGCAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGGCCTTGACCTTTGCTTTACTGGTGGCCCTCCTGGT KasI (535) AgeI (552) 1▶ M A L T F A L L V A L L V

EcoO109I (667)
601 GCTCAGCTGCAAGTCAAGTGTCTGTGGGCTGTGATCTGCCTCAAACCCACAGCCTGGGTAGCAGGAGACCTTGATGCTCCTGGCACAGATGAGGAAA 13▶ L S C K S S C S V G C D L P Q T H S L G S R R T L M L L A Q M R K

XcmI (747)
701 ATCTCTTTTTCTCCTGCTTGAAGGACAGACATGACTTTGGATTTCCCCAGGAGGAGTTTGGCAACCAGTTCCAAAAGGCTGAAACCATCCCTGTCCTCC 47▶ I S L F S C L K D R H D F G F P Q E E F G N Q F Q K A E T I P V L

BglII (815)
801 ATGAGATGATCCAGCAGATCTTCAATCTCTTCAGCACAAAGGACTCATCTGCTGCTTGGGATGAGACCCTCCTAGACAAATTCTACACTGAACCTACCA 80▶ H E M I Q Q I F N L F S T K D S S A A W D E T L L D K F Y T E L Y Q

XmnI (990)
901 GCAGCTGAATGACCTGGAAGCCTGTGTGATACAGGGGGTGGGGGTGACAGAGACTCCCCTGATGAAGGAGACTCCATCTGGCTGTGAGGAAATCTTC 113▶ Q L N D L E A C V I Q G V G V T E T P L M K E D S I L A V R K Y F

BglII (1075)
BspHI (1070)
1001 CAAAGAATCACTCTCTATCTGAAAGAGAAGAAATACAGCCCTTGTGCCTGGGAGTTGTGAGAGCAGAAATCATGAGATCTTTTTCTTTGTCAACAACT 147▶ Q R I T L Y L K E K K Y S P C A W E V V R A E I M R S F S L S T N

MscI (1158)
NheI (1152)
1101 TGCAAGAAAGTTTAAAGAAGTAAGGAATGAAAACCTGGTTCAACATGGAATGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAAC 180▶ L Q E S L R S K E •

HpaI (1290)
1201 ACAACTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAAC

MfeI (1301) **EcoRI (1386)**
1301 ACAATTGCATTCATTTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATAC 144▶

1401 AGCATAGCAAACTTTAACCTCCAAATCAAGCCTCACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATT

SapI (1568)
1501 AGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTTTCATTCTTTATGTTTTAAATGCACCTG

SspI (1625) **SwaI (1639)**
1601 ACCTCCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCA

EcoO109I (1700)
1701 AGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGT 141▶ • N

1801 TCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGAT 139▶ 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 P A Y D S I

SacI (1900) **BstXI (1929)**
1901 GAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTC 106▶ 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 I T D F D K

StuI (2064)
2001 TGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAG 72▶ 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 A S I I E G T

2101 TCTTGGTCTGATGGCCGCCCGACATGGTGTGTTGCTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGA 39▶ 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 E L D Q Q S

BbsI (2210) **XmnI (2206)** **AseI (2272)**
2201 GATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCG 6▶ I N F T K M

SacI (2329)
2301 TCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTA

2401 CGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTAT
SpeI (2427)
←

2500 CCACGCCATTGATGTAAGTCCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCCATAAAGGTCATGT
SnaBI (2555)

2600 ACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTAAGTGGGCAGTTTA
NdeI (2660)

2700 CCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATATTGACGTCAATGGGCGGGGTCGTTGGGC

2800 GGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG CAG G TT AA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAA
PstI (2839) SdaI (2838)PacI (2846) BspLU11I (2856)
←

2898 AAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCAAACCCGACAGGACTAT
 2998 AAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAG

3098 CGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGGTGATAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGAC
ApaLI (3170)

3198 CGCTGCGCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGA
 3298 GGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTAC
 3398 CTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAA

3498 GGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACAT
PacI (3586) SwaI (3595)

EagI (3606)
NotI (3605)

3598 TTAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAA
 3698 ACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA