



PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA **MfeI (82)**

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTCGCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGGCTTTGCCTTTGCTTTACTGATGGCCCTGGTGGT
1 M A L P F A L L M A L V V

XcmI (671)
601 GCTCAGCTCAAGTCAAGTGTCTCTGGACTGTGATCTGCCTCAGACCCACAGCCTGGGTACAGGAGGACCATGATGCTCCTGGCACAAATGAGGAGA
13 L S C K S S C S L D C D L P Q T H S L G H R R T M M L L A Q M R R

701 ATCTCTTTTTCTCTGTCTGAAGGACAGACATGACTTCAAGTTCCCGAGGAGTTTGTATGGCAACAGTCCAGAAAGGCTGAAGCCATCTCTGTCC
47 I S L F S C L K D R H D F R F P Q E E F D G N Q F Q K A E A I S V

XbaI (873)
801 TCCATGAGGTGATTGAGCAGACCTCAACTCTTTCAGCACAAAGGACTCATCTGTTGCTTGGGATGAGAGGCTTCTAGACAAACTCTATACTGAACTTTA
80 L H E V I Q Q T F N L F S T K D S S V A W D E R L L D K L Y T E L Y

901 CCAGCAGTGAATGACCTGGAAGCTGTGTGATGCAGGAGGTGTGGTGGGAGGACTCCCTGATGAATGAGGACTCCATCCTGGCTGTGAGAAAATAC
113 Q Q L N D L E A C V M Q E V W V G G T P L M N E D S I L A V R K Y

BspHI (1073)
1001 TTCAAAGAACTACTCTACCTGACAGAGAAAAAGTACAGCCCTTGTGCTGGGAGGTTGTAGAGCAGAAATCATGAGATCCTTCTTTCATCAAGAA
147 F Q R I T L Y L T E K K Y S P C A W E V V R A E I M R S F S S S R

MscI (1172)
NheI (1166)
1101 ACTTGCAAGAAAGGTTAAGGAGGAAGGAATAAGACCTGATCCAACACAGAAACGACTCCCATTTGACGCTAGCTGGCCAGACATGATAAGATACATTGATG
180 N L Q E R L R R K E •

1201 AGTTTGGACAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGTGAATAA

HpaI (1304) **MfeI (1315)**
1301 ACAAGTTAAACAACAACAAATTCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATG

EcoRI (1400)
1401 GAATTCATAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGT
1501 TGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTGAACTAGCTCTTCAATTTCTTTATG

SspI (1639) **SwaI (1653)**
1601 TTTAAATGCACTGACCTCCACATTCCCTTTTAGTAAATATTGAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAG

EcoO109I (1714)
1701 AATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAG

1801 CTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGA
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 P

SacI (1914) **BstXI (1943)**
1901 GCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACGCCACAATGG
110 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 I T

StuI (2078)
2001 TGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGA
77 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 A S

2101 GATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCGACTCC
44 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 E

BspHI (2228)
BbsI (2224)
XmnI (2220) **AseI (2286)**
2201 AGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAAA
10 L D Q Q S I N F T K M

SacI (2343)
2301 CAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCCTACCGCCATTTGCGTCAATG

SpeI (2441)
2401 GGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGA

2501 GTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCC
SnaBI (2569)

2601 CATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCA
NdeI (2674)

2701 AGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCG

2801 GGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCA
PstI (2853) **SdaI (2852)** **PacI (2860)** **BspLU11I (2870)**

2901 GGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCC
BspLU11I (2870)

3001 GACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTC

3101 CCTTCGGGAAGCGTGGCGCTTTTTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGG
ApaLI (3184)

3201 TTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGAT

3301 TAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTG

3401 AAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGGTGAATCGTAACTAACATACGCTCTC

3501 GCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAG

3601 TTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTC
EagI (3620) **PacI (3600)** **SwaI (3609)** **NotI (3619)**

3700 CATCAAAACAAAACGAAACAAAACAAAACACTAGCAAAATAGGCTGTCCCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA