



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA

MfeI (82)
101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552)
501 TCTGTTTCTGCCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATTGGATGACTCCACAGAAAGGGAGCAGTCACGCCTTAC

601 TTCTTGCCTTAAGAAAAGAGAAGAAATGAAACTGAAGGAGTGTGTTCCATCCTCCCACGGAAGGAAAGCCCTCTGTCCGATCCTCAAAGACGGAAG
13▶ S C L K K R E E M K L K E C V S I L P R K E S P S V R S S K D G K

MscI (788)
EcoO109I (782)
701 CTGCTGGCTGCAACCTTGTCTGCTGGCACTGCTGTCTTGTCTGCCTCACGGTGGTGTCTTCTACCAGTGGCCGCCTGCAAGGGGACCTGGCCAGCCTCC
47▶ L L A A T L L L A L L S C C L T V V S F Y Q V A A L Q G D L A S L

PstI (808) **XcmI (854)** **SacII (887)**
801 GGGCAGAGCTGCAGGGCCACCACGCGGAGAAGCTGCCAGCAGGAGCAGGAGCCCAAGGCCGGCCTGGAGGAAGCTCCAGCTGTACCGCGGGACTGAA
80▶ R A E L Q G H H A E K L P A G A G A P K A G L E E A P A V T A G L K
901 AATCTTTGAACCACAGCTCCAGGAGAAGGCAACTCCAGTCAGAACAGCAGAAATAAGCGTCCGTTCCAGGTCCAGAAGAACAGTCACTCAAGACTGC
113▶ I F E P P A P G E G N S S Q N S R N K R A V Q G P E E T V T Q D C
1001 TTGCAACTGATTGCAGACAGTAAACACCAACTATACAAAAAGACTTTACACATTTGTTCCATGGCTTCTCAGCTTTAAAAGGGGAATGCCCTAGAAG
147▶ L Q L I A D S E T P T I Q K G S Y T F V P W L L S F K R G S A L E

SspI (1113)
1101 AAAAAGAGAATAAAATATTGGTCAAAGAACTGGTTACTTTTTATATATGGTCAGGTTTTATATACTGATAAGACCTACGCCATGGGACATCTAATTCA
180▶ E K E N K I L V K E T G Y F F I Y G Q V L Y T D K T Y A M G H L I Q

BstXI (1212)
1201 GAGGAAGAAGTCCATGCTTTGGGGATGAATTGAGTCTGGTACTTTGTTTCGATGTATTCAAATATGCCTGAAACTACCCAATAATTCTGCTAT
213▶ R K K V H V F G D E L S L V T L F R C I Q N M P E T L P N N S C Y
1301 TCAGCTGGCATTGCAAACTGGAAGAAGGAGATGAACTCCAACCTGCAATACCAAGAGAAAATGCACAAATATCACTGGATGGAGATGCACATTTTTTG
247▶ S A G I A K L E E G D E L Q L A I P R E N A Q I S L D G D V T F F

MscI (1460)
NheI (1454)
1401 GTGCATTGAAACTGCTGTGACCTACTTACCCATGTCTGTAGCTATTTCTCCCGCTAGCTGGCCAGACATGATAAGATACTTGTGAGTTTGGACAAA
280▶ G A L K L L •

HpaI (1592)
1501 CCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAA

MfeI (1603) **EcoRI (1688)**
1601 CAACAATTGCATTCAATTTATGTTTCAGGTTCCAGGGGAGGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTGAAT

1701 ACAGCATAGCAAACTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCA

SapI (1870)
1801 TTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAAGATAGTGTATTTTCCCAAGGTTTGAAC TAGCTCTTCAATTTCTTTATGTTTTAAATGCAC

SspI (1927) **SwaI (1941)**
1901 TGACCTCCACATTCCTTTTTAGTAAAAATATTAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGCAGAAATCCAGATGCT

EcoO109I (2002)
2001 CAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTA
141▶ •

2101 GTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAG
140▶ 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 A Y D S

SacI (2202) **BstXI (2231)**
2201 ATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTT
106▶ 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 D F D K

StuI (2366)
2301 TCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCC
73▶ 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

2401 AGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTGGTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGA
40 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 L D Q Q

BbsI (2512)
XmnI (2508) **AseI (2574)**

2501 GAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGG
6 S I N F T K M

SacI (2631)

2601 CGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGT

SpeI (2729)

2701 TACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTA

SnaBI (2857)

2801 TCCAGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCAATG

NdeI (2962)

2901 TACTGGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTT

3001 ACCGTAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATATTGACGTCAATGGGCGGGGTCGTTGGG

PacI (3148)
PstI (3141)
SdaI (3140) **BspLU11I (3158)**

3101 CGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAA
3201 AGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATA
3301 AAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGC

ApaLI (3472)

3401 GTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACC
3501 GCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAG
3601 GTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACC
3701 TTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAG

PacI (3888) **Swal (3897)**

3801 GATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATT

EagI (3908)
NotI (3907)

3901 TAAATCAGCGGCCGCAATAAAAATATCTTTATTTTTCATTACATCTGTGTGGTTTTTTTGTGTTGAATCGTAACATAACGCTCTCCATCAAAAACAAA
4001 CGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA