



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

Psp1406I (203) HindIII (245) **Bsu36I (291)**
PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **Bsp120I**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTCAACATGTATAACATGATGGAGACGGAGCTGAAGCCGCGGG
1 M Y N M M E T E L K P P G
Tth111I (682)
RsrII (680)
601 CCCGACGCAAGCTTCGGGGGCGCGCGGGAGGAGCAACGCCACGGCGCGGCGACCGGCGGCAACCAGAAGAACAGCCCGGACCGCTCAAGAGGCC
13 P Q Q A S G G G G G G N A T A A A T G G N Q K N S P D R V K R P
XmnI (702) **XmaI (722)**
701 ATGAACGCCTTCATGGTATGGTCCCGGGGCGAGCGGCTAAGATGGCCAGGAGAACCCTCAAGATGCACAACCTCGGAGATCAGCAAGCGCCTGGGCGCGG
47 M N A F M V W S R G Q R R K M A Q E N P K M H N S E I S K R L G A
BssHII (858)
801 AGTGGAACTTTTGTCCGAGACCGAGAAGCGGCGTTCATCGACGAGGCAAGCGGCTGCGCGCTCTGCACATGAAGGAGCACCCGGATTATAAATACCG
80 E W K L L S E T E K R P F I D E A K R L R A L H M K E H P D Y K Y R
SacII (901) **BspHI (923)** **BsrBI (987)**
901 GCCGCGCGGAAAACCAAGACGCTCATGAAGAAGGATAAGTACACGCTTCCCGAGGCTTGTGGCCCCGGCGGGAACAGCATGGCCGAGCGGGTTGGG
113 P R R K T K T L M K K D K Y T L P G G L L A P G G N S M A S G V G
NgoMIV (1006) PvuII (1096)
1001 GTGGGCGCGGCTGGGTGCGGGCGTGAACCAGCGCATGGACAGCTACGCGCACATGAACGGCTGGAGCAACGGCAGCTACAGCATGATGCAGGAGCAGC
147 V G A G L G A G V N Q R M D S Y A H M N G W S N G S Y S M M Q E Q
XmaI (1116) **BstAPI (1149)** **PstI (1180)**
1101 TGGGTACCCGACGACCCGGGCTCAACGCTCACGGCGGGCACAGATGCAACCGATGCACCGCTACGACGTGAGCGCCTGCAGTACAACCTCCATGAC
180 L G Y P Q H P G L N A H G A A Q M Q P M H R Y D V S A L Q Y N S M T
NcoI (1283)
XcmI (1283)
1201 CAGCTCGCAGACTACATGAACGGCTCGCCACCTACAGCATGTCTACTCGCAGCAGGGCACCCCGGTATGGCGCTGGGCTCCATGGGCTCTGTGGTC
213 S S Q T Y M N G S P T Y S M S Y S Q Q G T P G M A L G S M G S V V
XcmI (1316) **BstEII (1329)** **EcoO109I (1370)**
1301 AAGTCCGAGCCAGCTCCAGCCCCCGTGGTTACCTCTTCTCCACTCCAGGGCGCCCTGCCAGGCGGGACCTCCGGGACATGATCAGCATGTACC
247 K S E A S S S P P V V T S S S H S R A P C Q A G D L R D M I S M Y
BsrBI (1464)
1401 TCCCCGGCGCGAGGTGCGGAGCCGCTGCGCCAGTACTGCACATGGCCAGCACTACAGAGCGCCCGGTGCGCGGCACGGCCATTAACGGCAC
280 L P G A E V P E P A A P S R L H M A Q H Y Q S G P V P G T A I N G T
MscI (1551)
NheI (1545)
1501 ACTGCCCTGTGCGACATGTGAGGCTGGACTGCGAAGTGGAGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAATA
313 L P L S H M •

HpaI (1683) MfeI (1694)
1601 GAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAACAACAACAATTG

EcoRI (1779)
1701 CATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTTCAAAATACAGCATAG
1801 CAAAATTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTT
1901 TGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTCCCAAGGTTTGAAGTACTGCTTCTCATTCTTTATGTTTTAAATGCACTGACCTCCC

SspI (2018) **SwaI (2032)** **EcoO109I (2093)**
2001 ACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCT
2101 TCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGT
141 • N R T
SacI (2293)
2201 GACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCT
137 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 L E
BstXI (2322)
2301 CTGCACATGCCACAGGGGCTGACCACTGATGGATCTGTCCACTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGT
103 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 Q G N
StuI (2457)
2401 TGCTCACAGCAGACCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGT
70 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 K T

2501 C T G A T G G C C G C C C G A C A T G G T G C T T G T T G T C C T C A T A G A G C A T G G T G A T C T T C T C A G T G G C G A C C T C C A C C A G C T C C A G A T C C T G C T G A G A G A T G T T G
37 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 I N

BspHI (2607)

BbsI (2603)

AseI (2665)

2601 A A G G T C T T C A T G A T G G C C C T C C T A T A G T G A G T C G T A T T A C T A T G C C G A T A C T A T G C C G A T G A T T A A T T G T C A A A C A G C G T G G A T G G C G T C T C C A G
3 F T K M

SacI (2722)

2701 C T T A T C T G A C G G T T C A C T A A A C G A G C T C T G C T T A T A T A G A C C T C C C A C C G T A C A C G C C T A C C G C C A T T T G C G T C A A T G G G G C G G A G T T G T T A C G A C A T T

SpeI (2820)

2801 T T G G A A A G T C C C G T T G A T T A C T A G T C A A A A C A A A C T C C C A T T G A C G T C A A T G G G G T G G A G A C T T G G A A T C C C C G T G A G T C A A A C C G T A T C C A C G C C C

SnaBI (2948)

2901 A T T G A T G T A C T G C C A A A A C C G C A T C A T C A T G G T A A T A G C G A T G A C T A A T A C G T A G A T G T A C T G C C A A G T A G G A A A G T C C C A T A A G G T C A T G T A C T G G G C A

NdeI (3053)

3001 T A A T G C C A G G C G G G C C A T T T A C C G T C A T T G A C G T C A A T A G G G G G C G T A C T T G G C A T A T G A T A C A C T T G A T G T A C T G C C A A G T G G G C A G T T T A C C G T A A A T

3101 A C T C C A C C C A T T G A C G T C A A T G G A A A G T C C T A T T G G C G T T A C T A T G G G A A C A T A C G T C A T T A T T G A C G T C A A T G G G C G G G G T C G T T G G G C G G T C A G C C

PacI (3239)

PstI (3232)

SdaI (3231)

3201 A G G C G G G C C A T T T A C C G T A A G T T A T G T A A C G C C T G C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G C A A A A G G C C A G G A A C C G T A A A A A G G C C G C G T

3301 T G C T G G C G T T T T T C C A T A G G T C C G C C C C C T G A C G A G C A T C A C A A A A T C G A C G C T C A A G T C A G A G G T G G C G A A A C C C G A C A G G A C T A T A A G A T A C C A

3401 G G C G T T T C C C C T G G A A G C T C C C T C G T G C G C T C T C T G T T C C G A C C T G C C G T T A C C G G A T A C C T G T C C G C T T T C T C C T T C G G G A A G C G T G G C G C T T

ApaI (3563)

3501 T C T C A T A G C T C A C G C T G T A G G T A T C T C A G T T C G G T G T A G G T C G T T C G C T C C A A G C T G G G C T G T G T G C A C G A A C C C C C G T T C A G C C G A C C G T G C G C C T

3601 T A T C C G G T A A C T A T C G T C T T G A G T C C A A C C C G T A A G A C A C G A C T T A T C G C C A C T G G C A G C A G C C A C T G G T A A C A G G A T T A G C A G A G C G A G G T A T G T A G G

3701 C G G T G C T A C A G A G T T C T T G A A G T G G T G G C C T A A C T A C G G T A C A C T A G A A G A A C A G T A T T T G G T A T C T G C G C T C T G T G A A G C C A G T T A C C T T C G G A A A A

3801 A G A G T T G G T A G C T T T G A T C C G G C A A A C A A C C A C C G C T G G T A G C G G T G G T T T T T T G T T T G C A A G C A G C A G A T T A C G C G C A G A A A A A A G G A T C T C A A G

PacI (3979) SmaI (3988) NotI (3998)

3901 A A G A T C C T T T G A T C T T T T C T A C G G G T C T G A C G C T C A G T G G A A C G A A A A C T C A C G T T A A G G G A T T T T G G T C A T G G C T A G T T A A T T A A C A T T T A A A T C A G C

4001 G G C C G C A A T A A A A T A T C T T T A T T T T C A T T A C A T C T G T G T G T T G G T T T T T G T G T G A A T C G T A A C T A A C A T A C G C T C T C C A T C A A A A C A A A A C G A A A C A A A

4101 A C A A A C T A G C A A A A T A G G C T G T C C C C A G T G C A A G T G C A G G T G C C A G A A C A T T T C T A T C G A A