



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535)
AgeI (552) **BspHI (560)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTTCATCATGATGTTCTCGGGTTTCAACGCCGACTACGAGGCGTC
 13> M M F S G F N A D Y E A S

EagI (626)

601 ATCCTCCCCTGTCAGTAGCGCTCCCGGGGACAGCCTTCTACTACCATTCCCAGCCGACTCCTTCTCAGCATGGGCTCTCTGTCAACACA
 13> S S R C S S A S P A G D S L S Y Y H S P A D S F S S M G S P V N T

BglIII (714) **FspI (709)**

701 CAGGACTTTTGGCGAGATCTGTCCGTCTCTAGTGCCAACCTTTATCCCCAGGTGACAGCCATCTCCACAGCCAGACCTGCAGTGGCTGGTGCAGCCCA
 47> Q D F C A D L S V S S A N F I P T V T A I S T S P D L Q W L V Q P

BsrBI (884)

801 CTCTGGTCTCCTCGTGGCCCCATCGCAGACCAGAGCGCCCCATCCTTACGGACTCCCACCCAGTCTGCTGGGGCTTACGCCAGAGCGGGAATGGTGAA
 80> T L V S S V A P S Q T R A P H P Y G L P T Q S A G A Y A R A G M V K

Tth111I (900)

901 GACCGTGTGAGGAGCAGAGCGCAGAGCATCGGCAGAAGGGGCAAAGTAGAGCAGCTATCTCCTGAAGAGGAAGAAACGGAGAATCCAAGGGAACGG
 113> T V S G G R A Q S I G R R G K V E Q L S P E E E E K R R I R R E R
 1001 AATAAGATGGCTGCAGCAAGTCCCGAATCGGAGGAGGAGCTGACAGATACCTCAAGCGGAGACAGATCAACTGAAGATGAGAAGTCTGCGTTGC
 147> N K M A A A K C R N R R E L T D T L Q A E T D Q L E D E K S A L
 1101 AGACTGAGATTGCCAATCTGCTGAAAGAGAAGGAAAACTGGAGTTTATTTTGGCAGCCACCGACCTGCCTGCAAGATCCCCGATGACCTTGGCTTCCC
 180> Q T E I A N L L K E K E K L E F I L A A H R P A C K I P D D L G F P

Bsu36I (1243)
StuI (1271)

1201 AGAGGAGATGCTGTGGCCTCCCTGGATTTGACTGGAGGTCTGCCTGAGGCTCCACCCAGAGTCTGAGGAGGCCTTCCACCTGCCCTTCTCAACGAC
 213> E E M S V A S L D L T G G L P E A S T P E S E E A F T L P L L N D
 1301 CCTGAGCCCAAGCATCCTTGGAGCCAGTCAAGAGCATCAGCAACGTGGAGCTGAAGGCAGAACCCTTTGATGACTTCTTGTTCGGCATCATCTAGGC
 247> P E P K P S L E P V K S I S N V E L K A E P F D D F L F P A S S R

BsrBI (1419)

1401 CCAGTGGCTCAGAGACCTCCCGCTCTGTGCCAGATGTGGACCTGTCCGGTTCCTTCTATGACGACAGACTGGGAGCCTCTGCACAGCAATTCTTGGGGAT
 280> P S G S E T S R S V P D V D L S G S F Y A A D W E P L H S N S L G M

NcoI (1505) **Bsp120I (1501)**
EcoO109I (1500)

1501 GGGGCCATGGTACAGAGCTGGAGCCCCTGTGTAAGTCCCGTGGTCACTGTACTCCGGGCTGCACTACTTACACGTCTTCTTTGTCTTACCTACCT
 313> G P M V T E L E P L C T P V V T C T P G C T T Y T S S F V F T Y P
 1601 GAAGCTGACTCCTTCCCAAGCTGTGCCGCTGCCACCGAAAGGCAGCAGCAGCAACGAGCCCTCCTCCGACTCCTGAGCTACCCACGCTGTGGCCC
 347> E A D S F P S C A A A H R K G S S S N E P S S D S L S S P T L L A

MscI (1729)

1701 TGTGAGCAGTCAGAGAAGGCAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTT
 380> L •

HpaI (1861) **MfeI (1872)**

1801 TATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAACATTGCATTCATTTTATGTTTCAGGTT

EcoRI (1957)

1901 CAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCA
 2001 AGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTTTTCATG

SspI (2196)

2101 GAGTTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACTCTTCAATTTCTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTATGTAATAA

SwaI (2210)
EcoO109I (2271)

2201 TTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGT
 2301 AGTTGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCC
 141> • N R T Y K L P I L E
 2401 TCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGA
 129> 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 R C M G C P S V

2501 CCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGC
96 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 S V A S G I A
StuI (2635)

2601 AATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGG
63 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 R I A A G V H
BspHI (2785)

2701 TGCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCC
29 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 F T K M
XmnI (2777)

2801 TATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAA
AseI (2843)

2900 CGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCCCGTTGATTTA
SpeI (2998)

3000 CTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTA CTGCCAAAAC
SnaBI (3126)

3099 GCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTT
NdeI (3231)

3199 ACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAA
3299 TGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGGGGGGTCTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAA
SdaI (3409) PacI (3417) BspLU11I (3427)

3399 GTTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCCGCTTGTGGCCTTTTCCATA
3497 GGCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCTGGAAG
3597 CTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGT
ApaLI (3741)

3697 AGGTATCTCAGTTCGGTGTAGGTGCTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCCTGCGCCTTATCCGGTAACTATCGTC
3797 TTGAGTCAAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTT
3897 GAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGA
3997 TCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT
EagI (4177)

4097 CTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATC
PacI (4157) SmaI (4166) NotI (4176)

4196 TTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAACGAAACAAACAACTAGCAAATAG
4296 GCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA