



PvuI (7)
SgfI (6)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCCTGTGGTGCCTCCTGAAGCTCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

NcoI (560) **BstEII (555)** **AgeI (552)** **BsrBI (571)**
501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTACCATGGAGGGCGAGCGGGCGCCGCTGTTGGGTTCCGCGCG

1 M E G E R A P L L G S R R

SacII (620)
601 TCCGGCAGTGTCCGGCGCGTCCGCGGTGTTCCGGGGCGCGTGCGGCGTCCGGGGCGGTGCTGTTGGCCGAGCTGCTGGAGCGCGGGCCTTCTACGGC

13 P A V S A A S A V F A G R R A A C G A V L L A E L L E R A A F Y G

AscI (730)
701 GTCACGGCCAACCTGGTGTCTTCTGAATGGCGCGCGTTCGACTGGGAGGGCGCGCAGGCCAGCCAGCGCTGCTGCTTTCATGGGCCTCACCTATC

47 V T A N L V L F L N G A P F D W E G A Q A S Q A L L L F M G L T Y

Bsp120I (845) **EagI (840)**
801 TGGGCTCGCGTTCCGGGGCTGGCTCGCCGACGCCCGCTCCGGCGGGCCGACCTCTGCTCAGCCTGGCCCTTACCTGCTGGGCTGCTGGCCTT

80 L G S P F G G W L A D A R L G R A R A I L L S L A L Y L L G L L A F

SacII (946) **BsrBI (918)** **SandI (941)** **FspI (962)**
901 CCCGCTGCTGGCCGCGCCGCTCCCTCTCTGCGGGACCCGCGGCCGAGCTCGTGCCTGCTGGCCTTCCCAACGGGTGACGG

113 P L L A A P R S R S F L C G D P R P E L V R N C S A P F P N G S A

1001 TCGTGTCCCGAGAACCGCGCGCGCTGTGCCCGCCACCTTCCGGGGCTCGTGTCTGTTGGTCTCGGGTGGCCACGGTCAAGGCCAACATCACGC

147 S C P E N A A R R C A P A T F A G L V L V G L G V A T V K A N I T

AseI (1174)
1101 CCTTCGGCGCGGATCAGGTTAAAGATCGAGGTCCAGAAGCCACTCGGAGATTTTTCAATTGGTTTTACTGGAGCATTAAATTTGGGAGCAATCCTGTCATT

180 P F G A D Q V K D R G P E A T R R F F N W F Y W S I N L G A I L S L

1201 AGGAGGTATTGCCTATATTCAGCAGAATGTGAGCTTTTCCAGGCTACTGATTCACAGTCTGTGTGGCCATTGCTTCTGCTTCTCTGTGGC

213 G G I A Y I Q Q N V S F F T G Y L I P T V C V A I A F L V F L C G

EcoRI (1355) **BspLU11I (1346)**
1301 CAGAGTGTCTTCATCACCAAGCCTCCTGACGGCAGTGCCTTCACTGACATGTTGAGAACTTCTGACCTACAGTTGCTGCTCCAGAGAGGGGAGCGGGA

247 Q S V F I T K P P D G S A F T D M F R I L T Y S C C S Q R G G Q R

StuI (1410)
1401 GAAGTGGTGAAGGCTTGGAGTCTTTCAGCAATCTTAAACACAGTCTGTTTGATTGATGTAAGATGTCGCGTGGAGGGCCGTTACAGAGGACAAAGT

280 R S G E G L G V F Q Q S S K H S L F D S C K M S R G G P F T E D K V

NdeI (1586)
1501 GGAAGACGTGAAAGCCCTGGTCAAGATTGTGCCGTGTTCTTGGCTCTGATTCTTACTGGACAGTGTATTTCCAAATGCAGACCACATATGCTTTACAG

313 E D V K A L V K I V P V F L A L I P Y W T V Y F Q M Q T T Y A L Q

1601 AGTCTTCATTGAAGATTCAGAAATCAAGTATCACACCACCCATCACAGCTGCTGACGCTGGCTCACCATGTTGATGCGGTGCTCATCTCC

347 S L H L K I P E I S S I T T T H H T L P A A W L T M F D A V L I L

1701 TGCTCATCCACTGAAGGACAAGCTGGTGGACCGGTGCTGAGGAGACATGGCCTGCTCCATCCTCCTGAAGAGGATTGCTGTGGGATGTTCTTCGT

380 L L I P L K D K L V D P V L R R H G L L P S S L K R I A V G M F F V

BstXI (1872)
1801 CATGTGCTCTGCCTTTGCTGCAGGAATCCTGGAGAGTAAAAGGCTGGACTGGTAAAAGGAGAAGACCATTAACAGACCATTGGTGGTGTGGTACCAT

413 M C S A F A A G I L E S K R L D L V K E K T I N Q T I G G V V Y H

1901 GCTGCTGACTTGGCCATCTGGTGGCAGATCCCACAGTATGTGCTCATTGGCATCAGTGAATATTTGCAAGTATAGCAGGTCTGGAATTTGCATACTCAG

447 A A D L P I W W Q I P Q Y V L I G I S E I F A S I A G L E F A Y S

2001 CTGCCCCAAGTCCATGCAGAGCGCCATCATGGGACTCTTCTTCTTCTGCTGGCATTGGGTCTTTGTGGGCTCAGGACTGTTGGCCCTGGTGTCTCT

480 A A P K S M Q S A I M G L F F F S G I G S F V G S G L L A L V S L

2101 CAAGGCCATTGGGTGGATGAGCAGTCATACAGATTTTGGGAACATCAACAGCTGCCACCTGCATTACTACTTCTTCTGCTGGCCGATCCAGGGAGCT

513 K A I G W M S S H T D F G N I N S C H L H Y Y F F L L A A I Q G A

SphI (2299)
2201 ACGCTGCTCTTCTCATTGTGTCTGTGAAGTACGACCCAGCGAGCCAGGACAGATGGGGGGCCAGCCAGCAGGACCTGATGCAGCCAGCCAG

547 T L L L F L I V S V K Y D R Q R A R T D G G P A S T R T •

NheI (2328)
2301 CATGCTCACAGTTCTGCAGACTCTAAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAAA

HpaI (2466)
2401 TGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAACAAATTGCATTCTTTTATGTTTC

2501 AGGTTTCAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAAATCTAAAATACAGCATAGCAAACTTTAACCTCCA
EcoRI (2562)
2601 AATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTT
2701 TCATGGAGTTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTCTTCAATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTAGTA

SspI (2801) SwaI (2815)
2801 AAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGT
2901 TTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTTGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGGATGA
141 • N R T Y K L P I L
3001 GTTCCTCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGG
131 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 R C M G C P
BstXI (3105)
3101 GCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCA
98 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 S V A S G
StuI (3240)
3201 ATGGCAATGGCTTCAAGCAGACAGTGCACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGA
64 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 R I A A G V
BspHI (3390)
3301 CATGGTGCTTGTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGCTTTCATGATGGC
31 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 F T K M
AseI (3448)
3401 CCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCAC
3501 TAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTTGA

SpeI (3603)
3601 TTTACTAGTCAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAA

SnaBI (3731)
3700 AACCCGATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTAAGTGGGCATAATGCCAGGCGGGCC

NdeI (3836)
3800 ATTTACCCTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTAAGTGGGCAGTTTACCCTAAATACTCCACCCATTGACG
3900 TCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATATTGACGTCAATGGGCGGGGCTGTTGGGCGGTGAGCCAGGCGGGCCATTACC

SdaI (4014) PacI (4022) BspLU11I (4032)
4000 GTAAGTTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTC
4098 CATAGGCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAAGTCAAGGTTGGGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTG
4198 GAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTCGGGAAAGCGTGGCGTTTTCTCATAGCTCACG

ApaLI (4346)
4298 CTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTAT
4398 CGTCTTGAAGTCCAAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCACTGTTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT
4498 TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTC
4598 TTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATC

EagI (4782)
PacI (4762) SwaI (4771) NotI (4781)
4698 TTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAAT
4798 ATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAA
4898 TAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA