



PvuI (7)
SgfI (6)
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTATGTCGTGACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGGTGCATTTTTGGATAAACCCAAAACCTGAAAAACA

1▶ M G A F L D K P K T E K H

SphI (644)
601 TAATGCTCATGGTCTGGGAATGTTTTACGTTATGGCCTGAGCAGCATGCAAGGATGGAGAGTGGAAATGGAAGATGCACACACAGCTGTTGTAGGTATT

13▶ N A H G A G N G L R Y G L S S M Q G W R V E M E D A H T A V V G I

BamHI (751)
701 CCTCACGGCTTGAAGACTGGTCATTTTTGTCAGTTTATGATGGTCATGGATCCCGAGTGGCAAATTACTGCTCAACACATTTATTAGAACACATCA

47▶ P H G L E D W S F F A V Y D G H A G S R V A N Y C S T H L L E H I

801 CTAATAACGAAGACTTTAGGGCAGCTGGAAAATCAGGATCTGCTCTTGGAGCTTTCAGTGGAAAATGTTAAGAATGGTATCAGAACTGGATTTTTGAAAAT

80▶ T T N E D F R A A G K S G S A L E L S V E N V K N G I R T G F L K I

901 TGATGAATACATGCGTAACTTTTTCAGACCTCAGAAAACGGGATGGACAGGAGTGGTTCAACTGCAGTGGGAGTTATGATTTACCTAAGCATATCTACTTT

113▶ D E Y M R N F S D L R N G M D R S G S T A V G V M I S P K H I Y F

BbrPI (1016)
1001 ATCAACTGTGGTATTACGCTGCTGTTCTGTATAGGAATGGACAAGTCTGCTTTTTCTACCCAGGATCACAAAACCTTGCATCCAAGGGAAAAGGAGCGAA

147▶ I N C G D S R A V L Y R N G Q V C F S T Q D H K P C N P R E K E R

1101 TCCAAAATGCAGGAGGCAGCGTATGATACAACGTGTTAATGGTTCATTAGCAGTATCTCGTCTCTGGGGACTATGATTACAAGTGTGTTGATGGCAA

180▶ I Q N A G G S V M I Q R V N G S L A V S R A L G D Y D Y K C V D G K

Bsp120I (1200) **Bsu36I (1231)**
1201 GGGCCCAACAGAACTGTTTCTCCAGAGCCTGAGGTTTATGAAATTTAAGAGCAGAAGAGGATGAATTTATCATCTTGGCTTGTGATGGGATCTGG

213▶ G P T E Q L V S P E P E V Y E I L R A E E D E F I I L A C D G I W

1301 GATGTTATGAGTAATGAGGAGCTCTGTAATATGTTAAATCTAGGCTTGGAGTATCTGATGACCTGGAAAATGTGTCAATGGGTAGTGGACACTTGT

247▶ D V M S N E E L C E Y V K S R L E V S D D L E N V C N V V D T C

1401 TACACAAGGGAAGTCAGATAACATGAGTATTGACTAGTTTCTTTCAAATGCTCCAAGTCTCAGATGAAGCGGTGAAAAAAGATTAGAGTTGGA

280▶ L H K G S R D N M S I V L V C F S N A P K V S D E A V K K D S E L D

FspI (1577)
1501 TAAGCACTTGAATCACGGGTTGAAGAGATTATGGAGAAGTCTGGCGAGGAAGGAATGCCTGATCTTGCCCATGTCATGCGCATCTTGTCTGCAGAAAAT

313▶ K H L E S R V E E I M E K S G E E G M P D L A H V M R I L S A E N

1601 ATCCAAAATTTGCCTCCTGGGGAGGCTTGTCTGGCAAGCGTAATGTTATTGAAGCTGTTTATAGTAGACTGAATCCACATAGAGAAAGTATGAGGGGCT

347▶ I P N L P P G G G L A G K R N V I E A V Y S R L N P H R E S D G A

AseI (1762)
1701 CCGATGAAGCAGAGGAAAGTGGATCACAGGGAAAATTTGGTGAAGCTCTCAGGCAAATGAGAATTAATCATAGGGGAAACTACCGACAACCTTCTGGAGGA

380▶ S D E A E E S G S Q G K L V E A L R Q M R I N H R G N Y R Q L L E E

NheI (1818) **BstBI (1875)**
1801 GATGCTGACTAGTTACAGGCTAGCTAAAGTAGAGGAGAAGAAAGCCCTGCTGAACCAGCTGCCACAGCTACTTCTCGAACAGTGTGATGGAAACCCA

413▶ M L T S Y R L A K V E G E S P A E P A A T A T S S N S D A G N P

1901 GTGACAATGCAGGAAAGCCATACTGAATCAGAAAAGTGGTCTTGTGTAATTAGACAGCTCTAATGAAGATGCAGGGACAAAGATGAGTGGTAAAAAATAT

447▶ V T M Q E S H T E S E S G L A E L D S S N E D A G T K M S G E K I

SspI (2016) **AvrII (2029)** **MscI (2041)**
2001 GACTTTCTTTTTGGTAATATTTTTGTGACCTAGGACTAGTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAATGCAGTG

480▶ •

HpaI (2173)
2101 AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACCAAGTTAACAAACAATTGCATTCATTTT

EcoRI (2269)
2201 ATGTTTCAGGTTACGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTA

2301 ACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCA

SapI (2451)
2401 CCTCTTTTCATGGAGTTAAGATATAGTGATTTTTCCAAAGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTT

SspI (2508) SwaI (2522)
2501 TTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATC
2601 CCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGG
141 • N R T Y K L
2701 GGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGC
133 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 R C M G
BstXI (2812)
2801 CACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGC
100 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 S V A
StuI (2947)
2901 AGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCC
67 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 R I A
XmnI (3089)
3001 GCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGTGAGAGATGTTGAAGTCTTCA
33 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 F T K M
AseI (3155)
3101 TGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCTGGATGGCGTCTCCAGCTTATCTGAC
0
3201 GGTTCATAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAGTC
3301 CCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAC
SnaBI (3438)
3401 TGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGG
NdeI (3543)
3501 CGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACTTGTACTGCAAGTGGGCAGTTTACCGTAAATACTCCACCCA
3601 TTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCA
PacI (3729)
SdaI (3721) BspLU11I (3739)
3701 TTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAGGCCGCTTGTGGCGTT
3801 TTTCCATAGGCTCCGCCCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCC
3901 CCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCT
ApaLI (4053)
4001 CACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTACGCCGACCGTGGCCTTATCCGGTAA
4101 CTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACA
4201 GAGTTCCTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTA
4301 GCTCTTGATCCGGCAAACAAACCACCGTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTT
EagI (4489)
PacI (4469) SwaI (4478) NotI (4488)
4401 GATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATA
4501 AAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGC
4601 AAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA