



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82) **EcoNI (96)**
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
EcoNI (287) 201 GTGAACGTTCTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

KasI (535) **AgeI (552)** **SphI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAGCATGCAGCTGAGAAAAATGCAGACCGTCAAAAAGGAGCA
1 M Q L R K M Q T V K K E Q

XcmI (614) 601 GGCCTCTCTTGATGCCAGTAGCAATGTGGACAAGTATGGTCCCTAATTCTGCTTTAACGGAAGTGTGAGAAGACTCCACAACAGGTGAGGAGCTGCTT
13 A S L D A S S N V D K M M V L N S A L T E V S E D S T T G E E L L
701 CTCAGTGAAGGAAGTGTGGGAAGAACAATCTTCTGCATGTCGGAGGAAACGGGAATTCATTCTGATGAAAAGAAAGATGCTATGTATTGGAAAAAA
47 L S E G S V G K N K S S A C R R K R E F I P D E K K D A M Y W E K

BglIII (826) **SalI (842)** 801 GCGGAAAAATAATGAAGCTGCCAAAAGATCTCGTGAGAAGCGTCGACTGAATGACCTGGTTTTAGAGAACAATAATTGCACTGGGAGAAGAAAACGC
80 R R K N N E A A K R S R E K R R L N D L V L E N K L I A L G E E N A
NdeI (959) 901 CACTTTAAAAGCTGAGCTGCTTCACTAAAATTAAGTTTGGTTAATTAGCTCCACAGCATATGCTCAAGAGATTCAGAAAACAGTAATTCTACAGCT
113 T L K A E L L S L K L K F G L I S S T A Y A Q E I Q K L S N S T A
1001 GTGTACTTTCAAGATTACCAGACTTCAAATCCAATGTGAGTTCATTTGGACGAGCACGAACCCCTCGATGGTGTCAAGTAGTTGTATTCTGTCATTA
147 V Y F Q D Y Q T S K S N V S S F V D E H E P S M V S S S C I S V I
1101 AACACTCTCCACAAGCTCGCTGTCGATGTTTCCAGAAAGTGTCTCAGTAGAACACACGAGGAGAGCTGTGACAGGGAAGCTGCAGAAAGTCCGTGAAAA
180 K H S P Q S S L S D V S E V S V E H T Q E S S V Q G S C R S P E N
1201 CAAGTCCAGATTCAAGCAAGAGCCGATGGAATTAGAGAGCTACACAAGGAGCCAAAGAGATGACCGAGGCTTTACACAGCGTCCATCTATCAAAAC
213 K F Q I I K Q E P M E L E S Y T R E P R D D R G S Y T A S I Y Q N
1301 TATATGGGAATTTCTTCTGTTACTCACACTCTCCCCACTACTGCAAGTCAACCGATCTCCAGCAACTCCCGAGAAGCTCGGAAACTGATGATG
247 Y M G N S F S G Y S H S P P L L Q V N R S S S N S P R T S E T D D

Bsp120I (1449) **SphI (1485)** 1401 GTGTGGTAGGAAAGTCATCTGATGGAGAAGACGAGCAACAGGTCCCAAGGGCCCATCCATTCTCCAGTTGAACTCAAGCATGTGCATGCAACTGTGGT
280 G V V G K S S D G E D E Q Q V P K G P I H S P V E L K H V H A T V V

BspEI (1541) 1501 TAAAGTCCAGAAGTGAATTCCTCTGCCTGCCACACAAGCTCCGGATCAAAGCCAAAGCCATGCAGATCAAAGTAGAAGCCTTTGATAATGAATTTGAG
313 K V P E V N S S A L P H K L R I K A K A M Q I K V E A F D N E F E

BstBI (1648) 1601 GCCACGAAAAAATTTCTCACCTATTGACATGACATCTAAAAGACATTTGAACTCGAAAAGCATATGCCCCAAGTATGGTACATTCTTCTTACTC
347 A T Q K L S S P I D M T S K R H F E L E K H S A P S M V H S S L T
1701 CTTTCTCAGTGCAAGTGACTAACATTCAAGATTGGTCTCTCAAATCGGAGCAGTGGCATCAAAAAGAAGTGGTGGCAAAACTCAGAATAGTTTCAAAC
380 P F S Q V T N I Q D W S L K S E H W H Q K E L S G K T Q N S F K T
1801 TGGAGTSTVTGAAATGAAAGACAGTGGCTACAAAGTTCTGACCCAGAACTTGTATTTGAAGCAGGGGATAGCAAACCTTATCTGCAGAGGTTGTCTCA
413 G V V E M K D S G Y K V S D P E N L Y L K Q G I A N L S A E V V S

MscI (1993) **NheI (1987)** 1901 CTCAAGAGACTTATAGCCACACAACCAATCTCTGCTTCAAGTCTGGGTAATAACTACTGAGTAAGAGCTGGGCATTTAGAAAAGATGCTAGCTGGCCAG
447 L K R L I A T Q P I S A S D S G •
2001 ACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGT

HpaI (2125) **MfeI (2136)** 2101 AACCATATAAGCTGCAATAAACAAGTTAAACAACAACAAATTCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAA
2201 AACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAA
2301 GGCATAGGCATCAGGGGCTGTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTCCCAAGTTTGAA

SspI (2460) **SwaI (2474)** 2401 CTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAA
2501 TAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAA
2601 ATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCA
141 • N R T Y K L P I L E E I T T K V L K G N M E

BstXI (2764) 2701 ATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATGTGCCACCTCATCAGAGTAGG
117 I L V F C D P A Y D S I L E R C M G C P S V V R I S R D V E D S Y P

2801 GGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTA
 84 H R V A V I T D F D K Q G N S V A S G I A I A E A C V T V R G I Y
 2901 GGCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCTCA
 51 A E I H V A S I I E G T K T R I A A G V H H K N D E Y L M T I K E

BspHI (3049)

3001 GTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCAATGATGGCCCTCTATAGTGAGTCTGATTATACTATGCCGATATACTAT
 17 T A V E V L E L D Q Q S I N F T K M

AseI (3107)

3101 GCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCC

SpeI (3262)

3201 TACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTG

SnaBI (3390)

3301 GAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATG

NdeI (3495)

3401 TACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATAT

3501 GATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGT

PacI (3681)

SdaI (3673)

BspLU11I (3691)

3601 CATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAG

3701 CAAAAGGCCAGCAAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTC

3801 AAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGTTACC

3901 GGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTCCGCTCCAAGCTGG

ApaLI (4005)

4001 GCTGTGTGCACGAACCCCCGTTTCCAGCCGACCGCTGCGCCTTATCCGTAATATCGTCTTGTAGTCCAAACCCGTAAGACACGACTTATCGCCACTGGC

4101 AGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGCCTAACTACGGCTACACTAGAAGAACAGTA

4201 TTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTG

4301 TTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTA

EagI (4441)

PacI (4421) SwaI (4430)

NotI (4440)

4401 AGGGATTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAA

4500 TCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGCAGGTGCCAGAACATTTCTCT

4600 ATCGAA