



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

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
PvuII (239) **EcoNI (287)**
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGAGTACAACGAGTAAGGAGTCACTGGAGAGCAATCT
1 M S T T S K E S L E S N L
601 GCGACAGCTAAAATGCCATTTACCTGGAACCTGATAGCAGAAGATGAGTCTTGGATGAGTTTGGAGACAGGGTGTAAACAAGGATGAGTTTCAGAAC
13 R Q L K C H F T W N L I A E D E S L D E F E D R V F N K D E F Q N

DraIII (714) **PstI (747)**
701 AGTGAGTTTAAAGCCACCATGTGCAACATACTGGCCTATGTAAGCACTGCAGAGGTCTAAATGAGGCAGCACTGCAATGCTTAGGGGAAGCTGAGGGCT
47 S E F K A T M C N I L A Y V K H C R G L N E A A L Q C L G E A E G

BstEII (843)
801 TCATCCAGCAACAGCATCTGACCAAGTAGAAATCAGAAGTCTGGTCACTGGGAAACTATGCTTGGTCTACTATCACATGGGCCAGTTCTCAAAGGC
80 F I Q Q Q H P D Q V E I R S L V T W G N Y A W V Y Y H M G Q F S K A

Bsp120I (992)
901 TCAGGCTTATCTGGATAAAGTGAACAGGTCTGCAAGAAGTTTCCAGCCCCTACAGGATTGAGAATCTGCTCTTGACTGTGAGGAGGGGTGGGCCCGA
113 Q A Y L D K V K Q V C K K F S S P Y R I E N P A L D C E E G W A R

EcoRI (1078)
1001 TTAAGTGTACCAAGAACCAAAACGAGAGAGTGAAGGTGTGTTCCAGAAGGCTCTGAAAAGGACCCGAAGAACCAGAATTCACCTCTGGATGGGCCA
147 L K C T K N Q N E R V K V C F Q K A L E K D P K N P E F T S G W A

MscI (1123)
1101 TTGCGAATACCGTCTGGATGACTGGCCAGCAAGGAATTAAGTCACTGCTCTGGAGCAAGCCATTCAACTGTCTCTGACAACACTTATGTTAAAGT
180 I A N Y R L D D W P A R N Y C I D S L E Q A I Q L S P D N T Y V K V

HindIII (1213)
1201 CCTCTTGGCACTGAAGCTTGACGCGGTACATAAAAAACCAAGCAATGGCGCTGGTTGAAGAAGCCTTAAAGAAAGACCCAAGTGAATAGATACACTCCTC
213 L L A L K L D A V H K N Q A M A L V E E A L K K D P S A I D T L L
1301 AGGCAGCCAGGTTTATTGCAAGGTATGACACAGACAGAGCTATACAGTTGCTTAGAAAAGCTTTGGAAAAGCTGCCAAAACACGCTATGTGCATT
247 R A A R F Y C K V Y D T D R A I Q L L R K A L E K L P N N A Y V H

NdeI (1435)
1401 ACTATATGGGGTGTCTTATAGGTCAAAGTCCATCATATGTTGAACAGAAGGAAATGGTATTTAGTGGGGATAGGAAGAAGTTAGAGGAACTAATACA
280 Y Y M G C C Y R S K V H H M L N R R E M V F S G D R K K L E E L I Q

SspI (1550)
1501 ACTGCGAGTGAATCACTTACGAAAAGCAGAGGAATCAAGGAGATGCTTGAATATTCCTGTAGCTTCTTCTGATCTTTATATCATAGCAAAAAAGTAT
313 L A V N H L R K A E E I K E M L E Y S C S F L A D L Y I I A K K Y

XcmI (1668)
1601 GACGAAGCCGATTACTACTTCCAGAAAAGATTGAGCAAGGACCTCCCTCTGGCCCTAAACAGTTACTCCACCTTCGGTATGGCAACTTTTCAGTTTTTTC
347 D E A D Y Y F Q K E L S K D L P P G P K Q L L H L R Y G N F Q F F
1701 AAATGAAGCGTCAAGACAAGGCTATCTACCATTATATGGAGGGTGTGAAAATAAAGAAGAAAACATCCCAAAAAAGATGAGAGAGAAACTTCAAAG
380 Q M K R Q D K A I Y H Y M E G V K I K K K T I P Q K K M R E K L Q R

BspHI (1818) **StuI (1841)**
1801 AATTGCCCTAAGCGGCTTCATGAAGATGAGTCTGATTCTGAGGCTTGCATATCTTGGCATTCTTCAGGAGAATGGAGGAGGTGAGCAAGCTGATAAA
413 I A L R R L H E D E S D S E A L H I L A F L Q E N G G G Q Q A D K

NheI (1989)
1901 GACTCTGAGAGGGGAGTGGACTCTGCAACCAGGTACCTTCAGCATCTTTGGATGAAGCAGGTGCTGAATACTAGTGATGGTACCCGGCTAGCTGGCC
447 D S E R G V D S A N Q V P S A S L D E A G A E Y •

Acc65I (1932) **SpeI (1970)** **Acc65I (1981)** **MscI (1995)**
2001 AGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGAAGTGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTT

HpaI (2127) **MfeI (2138)**
2101 GTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGT

EcoRI (2223)
2201 AAAACCTCTACAATGTGGTATGGAATTTCAAATACAGCATAGCAAACTTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAAT
2301 AAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTTAAAGATATAGTGTATTTTCCAAGGTTTG

SspI (2462) **SwaI (2476)**
2401 AACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTGTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAA
2501 AATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGAGCTTAGGGAACAAAGAACCTTTAATAG

2601 AAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCTGGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCT
141 • N R T Y K L P I L E E I T T K V L K G N M E
SacI (2737) BstXI (2766)
2701 CAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTA
118 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
2801 GGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATG
85 P 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
StuI (2901)
2901 TAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGTCCTCATAGAGCATGGTGTCTTCT
51 Y 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
BbsI (3047)
3001 CAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACT
18 T A V E V L E L D Q Q S I N F T K M
AseI (3109) SacI (3166)
3101 ATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACCG
SpeI (3264)
3201 CCTACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGG
SnaBI (3392)
3301 TGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGA
NdeI (3497)
3401 TGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCAT
3501 ATGATACACTTGATGTAAGTGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATAC
PacI (3683)
3601 GTCATTATTGACGTCAATGGGGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAAGAACATGTG
PstI (3676) SdaI (3675) BspLU11I (3693)
3701 AGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAGGCGCGTGGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGC
3801 TCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAAGTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTA
3901 CCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCT
ApaLI (4007)
4001 GGGCTGTGTGCACGAACCCCGTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAAGACACGACTTATCGCCACTG
4101 GCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAG
4201 TATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGTTTTTT
4301 TGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGT
EagI (4443)
4401 TAAGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGTTTTTTGTGTA
PacI (4423) SmaI (4432) NotI (4442)
4501 ATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGACGGTGCCAGAACATTTCTC
4601 TATCGAA