



125

PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGCGTTGAGTTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) **AgeI (552)**
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTACCATGGTGGTGGTTTACCAGGGACCTCAGCGGGCTGA
601 TGCAGAGACCCTGCTGAAGGGCCGGGAGTCCCTGGGAGCTTCTGGCTCGGCCAGCCGCAAGAACCAGGGTACTTCTCCCTCAGTCAGGGTGGAT
13▶ A E T L L K G R G V P G S F L A R P S R K N Q G D F S L S V R V D
701 GATCAGGTGACTCATATTCGATCCAGAAGCTCAGGGACTTCTATGACCTGTACGGAGGGGAGAAGTTTGCAGCCTGACAGAGCTGGTCGAGTATTACA
47▶ D Q V T H I R I Q N S G D F Y D L Y G G E K F A T L T E L V E Y Y
Asp718I (890)
Acc65I (890)
801 CGCAGCAGCAGGGCCTCCTGCAGGACCGAGATGGCACCATCATCCACCTTAAGTACCCACTGAACTGCTCGGACCCACCAGTGAGAGGTGGTACCACGG
80▶ T Q Q Q G I L Q D R D G T I I H L K Y P L N C S D P T S E R W Y H G
901 CCACATATCTGGAGGGCAGGCGGAGTCACTGCTGCAGGCCAAGGGCGAGCCCTGGACATTTCTGTGCGTGAGAGTCTCAGCCAACTGGTGATTTTGTG
113▶ H I S G G Q A E S L L Q A K G E P W T F L V R E S L S Q P G D F V
XcmI (1017) **BsrBI (1042)**
1001 CTCTCTGTGCTCAATGACCAGCCCAAGGCTGGCCAGGTTCCCGCTCAGGGTCACTCATATCAAGTTATGTGTGAGGGTGGACGCTATACTGTGGGTG
147▶ L S V L N D Q P K A G P G S P L R V T H I K V M C E G G R Y T V G
StuI (1163)
Eco147I (1163)
1101 GCTCAGAGACGTTTGACAGCCTCACAGACCTGGTGGAGCACTTCAAGAAGACAGGGATTGAGGAGCCCTCGGGTGCCTTTGTCTACCTGCGGCAGCCTTA
180▶ G S E T F D S L T D L V E H F K K T G I E E A S G A F V Y L R Q P Y
1201 CTACGCTACTCGGGTAAACGCAGCTGACATTGAGAATCGGGTCTTGAAGTGAACAAGAAGCAGGAGTGGAGGACACAGCCAAAGGCTGGCTTCTGGGAG
213▶ Y A T R V N A A D I E N R V L E L N K K Q E S E D T A K A G F W E
1301 GAGTTTGAGAGTCTACAAAAGCAGGAGGTAAAGAATCTACACCAACGCTCTGAAAGGGCAGCGCCAGAGAACAAGAGCAAGAACCCTACAAGAACATTC
247▶ E F E S L Q K Q E V K N L H Q R L E G Q R P E N K S K N R Y K N I
1401 TTCCCTTTGACCACAGCCGAGTGATCCTGCAGGGAGTGCAGTAAACATCCAGGCTCTGACTACATCAATGCCAACTACGTGAAGAACCAGCTGACTAGG
280▶ L P F D H S R V I L Q G R D S N I P G S D Y I N A N Y V K N Q L L G
1501 TCCAGATGAGAATCTAAGACCTACATCGCCAGCCAGGCTGTCTGGATGCCACAGTCAATGACTTCTGGCAGATGGCTTGGCAGGAGAACACTCGTGTCT
313▶ P D E N S K T Y I A S Q G C L D A T V N D F W Q M A W Q E N T R V
BspHI (1604)
1601 ATCGTCATGACTACCAGAGAGGTGGAGAAAGGCCGAACAAATGTGTCCATACTGGCCCGAGGTGGGCACTCAGCGTGTCTATGGTCTCTACTCTGTGA
347▶ I V M T T R E V E K G R N K C V P Y W P E V G T Q R V Y G L Y S V
BglII (1748)
1701 CCAACAGTAGGGAGCATGACACAGCAGAATACAACTGCGAACATTACAGATCTCCCACTAGACAATGGGGACCTGGTTCGGGAGATATGGCACTACCA
380▶ T N S R E H D T A E Y K L R T L Q I S P L D N G D L V R E I W H Y Q
NcoI (1818)
1801 GTACCTGAGCTGGCTGACCATGGGGTCCAGTGGGCTGGGGTGTCTCAGCTTTCTGGATCAGATCAACCAGCGACAGGAAAGTTTGCCTCATGCA
413▶ Y L S W P D H G V P S E P G G V L S F L D Q I N Q R Q E S L P H A
Bsp120I (1900) **Eco47III (1921)** **EagI (1932)**
1901 GGGCCATCATTGTGCATTGCGAGCGTGGCATCGGCCGACCCACCATCATCGTCATTGATGCTTATGGAAGCATCTCCACCAAGGGCTAGACT
447▶ G P I I V H C S A G I G R T G T I I V I D M L M E S I S T K G L D
EcoRV (2008) **Eco47III (2042)** **MscI (2090)**
2001 GTGACATTGATATCCAGAAGACCATCCAGATGGTACGAGCACAGCGCTCCGGCATGGTGCAGACCGAGGCCAGTACAAGTTTATTTACGTGGCCATTGC
480▶ C D I D I Q K T I Q M V R A Q R S G M V Q T E A Q Y K F I Y V A I A
XcmI (2117)
2101 CCAGTTCATCGAAACGACCAAGAAGAACTGGAGATCATAAATCCAGAAGGGCCAGGAGTGGAGTATGGGAATATCACGTACCCTCCCGCTGTGAGG
513▶ Q F I E T T K K K L E I I Q S Q K G Q E S E Y G N I T Y P P A V R
2201 AGTGGCCACGCCAAAGCCTCGGTACTTCTCCAAGCACAAGGAGGAGGTGTACGAAAACGTGCATAGCAAGCAAGAAGGAAGAGAAAGTAAAGAAGC
547▶ S A H A K A S R T S S K H K E E V Y E N V H S K S K K E E K V K K
MscI (2371)
NheI (2365)
2301 AGCGGTGCGGACAGCAAGGAGAAGAACAAGTTCTCTCAAGAGGAAGTGTCTGGCATTGCTGCTAGCTGGCCAGACATGATAAGATACATTGATGA
580▶ Q R S A D K E K N K G S L K R K •
2401 GTTGGACAACCAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA

HpaI (2503) MfeI (2514) **EcoRI**
 2501 CAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGG
 2601 AATTCTAAAAATACAGCATAGCAAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTT
 2701 GCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAAGATATAGTGATTTTTCCCAAGGTTTGAAGTCTCTTCATTTCTTTATGT

SspI (2838) SwaI (2852)
 2801 TTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAATATTGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATTAGGCAGA
 2901 ATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGC
 3001 TTCTAGCTTTAGTTCCTGGTGTACTTGTAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCACAAAGCAGTCAGGAG
 141 • N R T Y K L P I L E E I T T K V L K G N M E I L V F C D P A
SacI (3113)
 3101 CATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGT
 110 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 H R V A V I T
StuI (3277)
Eco147I (3277)
 3201 GTCAAAGTCTTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAG
 77 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 A E I H V A S
 3301 ATGATCTCCCAGTCTTGGTCTGTATGGCCGCCGACATGGTCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCA
 43 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 T A V E V L E L
VspI (3485)
AseI (3485)
XmnI (3419) **BspHI (3427)**
 3401 GATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAAC
 10 D Q Q S I N F T K M
SacI (3542)
 3501 AGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCTACTAAACGAGCTCTGTTATATAGACCTCCCACCGTACACGCTACCGCCATTTGCGTCAATGG

SpeI (3640)
 3601 GCGGAGTTGTTACGACATTTTGAAAGTCCCCTGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCTGTA

SnaBI (3768)
Eco105I (3768)
 3700 GTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCC

NdeI (3873)
 3800 CATAAGGTCATGTACTGGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCA
 3900 AGTGGGCAGTTTACCCTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGCGC

PciI (4069)
BspLU11I (4069)
 4000 GGGGTCGTTGGGCGTACGCGAGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCGAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGC
 4098 CAGGAACCGTAAAGGCCGCGTGTGCTGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC
 4198 CCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTC

ApaLI (4383)
 4298 TCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC
 4398 CGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG
 4498 ATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGC
 4598 TGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGTGGTAGCGGTGGTTTTTTTGTGTGCAAGCAGCAGATTAC
 4698 CGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGGATTTTGGTCATGGCT

EagI (4819)
NotI (4818)
 4798 AGTTAATTAACATTTAAATC AGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCT
 4898 CCATCAAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA