



PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82) EcoNI (96)
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
EcoNI (287)
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **SphI (560)** **NgoMIV (564)**
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCAGCATGCCGGCTTGTGCAGCTGGAACGATGTCTTGCAGTA
1▶ M P A C C S W N D V L Q Y
601 TGAGACAAACAAAGTCCACCGGATCCAGAGCACGAATTATGGCACCGTCAAGTGGGCTTGCACATGATCGCTTTTCTACATTAGCTTTGCTTTGGTG
13▶ E T N K V T R I Q S T N Y G T V K W V L H M I V F S Y I S F A L V
701 AGCGATAAGCTGTACCAGCGAAAGACCTGTTATCAGCTCCGTGCACACCAAGGTCAAAGGCATAGCAGAGGTGACGAGAAATGTCACAGAGGGTGGG
47▶ S D K L Y Q R K E P V I S S V H T K V K G I A E V T E N V T E G G
BspHI (872)
801 TGACGAAGTTAGGACACAGCATCTTTGACACTGCAGACTACACCTTCCCTTTGCAGGGGAACTCATTCTTTGCATGACAAACTATGTCAAGTCAGAAG
80▶ V T K L G H S I F D T A D Y T F P L Q G N S F F V M T N Y V K S E G
901 CCAAGTGCAGACGCTGTGCTCCTGAGTATCCCAGGCGGGTGCACAGTGTCTTCAAGCCGGCTGTGAAAAAGGGGTGGATGGACCCACAGAGCAAAGGA
113▶ Q V Q T L C P E Y P R R G A Q C S S D R R C K K G W M D P Q S K G

NdeI (1022) **BbsI (1038)**
1001 ATCCAGACTGGCAGGTGTTCATATGACAAGACAAGGAAGACCTGTGAAGTCTCTGCCTGGTGTCTACTGAGGAGGAGAAGAAGCTCCCCGACCTG
147▶ I Q T G R C V P Y D K T R K T C E V S A W C P T E E E K E A P R P
1101 CACTCTTGAGGAGCGCGAAAACCTCACGTAATCAAGAATAATCCACTTCCCGGCCACAACATAACACGAGAAACATCTTGCCAATATGAA
180▶ A L L R S A E N F T V L I K N N I H F P G H N Y T T R N I L P T M N

SmaI (1226)
1201 CGGCTCTGTACCTTTCACAAGACTTGGGACCTCAGTGTTCATCTCCGACTAGGGGACATCTCCAGGAAGCAGGAGAGAACCTTACAGAGGTGGCA
213▶ G S C T F H K T W D P Q C S I F R L G D I F Q E A G E N F T E V A

BglII (1325)
1301 GTTCAGGGAGGAATCATGGGTATCGAGATCTACTGGGATTGCAACCTAGACAGCTGGTCCCATCACTGCCGACCCAGGTACAGCTTCCGCCGCTGGATG
247▶ V Q G G I M G I E I Y W D C N L D S W S H H C R P R Y S F R R L D

ScaI (1451)
1401 ACAAGAACACGGATGAGTCTTTCGTCGCCGCTACAACCTCAGATATGCCAAGTACTATAAGGAGAACAATGTGAAAAGCGGACGTTGATCAAAGCCTT
280▶ D K N T D E S F V P G Y N F R Y A K Y Y K E N N V E K R T L I K A F

Bst1107I (1564) **MscI (1598)**
1501 CGGCATCCGTTTTGACATCTGGTTTTCGGCACTGGAGGAAAATTTGACATCATCCAGCTGGTGTATACATTGGATCCACCCTGTCTACTTTGGCTTG
313▶ G I R F D I L V F G T G G K F D I I Q L V V Y I G S T L S Y F G L

DraIII (1602)
1601 GCCACTGTGTGATTGACTTGTCTCATCAACATACTCCAGTGTCTTCTGCAGTCCGGGGTTTACCCTACTGTAAGTGTGTGAGCCCTGCACAGTGA
347▶ A T V C I D L L I N T Y S S A F C R S G V Y P Y C K C C E P C T V

SalI (1771)
1701 ACGAGTACTACAGAAAGAAGTGTGAGTCCATCATGGAACCAAGCCGACGTTGAAGTATGTGCTTTTGTGACGAGCCGACATTCGATGGTGGGA
380▶ N E Y Y R K K C E S I M E P K P T L K Y V S F V D E P H I R M V D

XcmI (1800)
1801 CCAGCAGTGTGGGAAAAGTCTGCAAGTTGTCAAAGGCCAAGAAGTCCAAGACCCAGATGGACTTCTCCGACCTGTCTAGGCTGTCCCTATCTCTC
413▶ Q Q L L G K S L Q V V K G Q E V P R P Q M D F S D L S R L S L S L
1901 CACGACTCACCCCGACTCCTGGACAATCTGAGGAAATCAGCTGCTCCATGAAGAGGTGGCCCTAAGTCTGGGACAGCCGAGTTGGTCCAGTGT
447▶ H D S P P T P G Q S E E I Q L L H E E V A P K S G D S P S W C Q C

Bsp120I (2036)
2000 GGAATTGCCTTCCGTCTCGCTACCGGAGCAACGCAGGCCCTGGAGGAGCTGTGCTGCCGAGGAAGCCGGGCGGTGCATACCACCTCCAAGCTCT
480▶ G N C L P S R L P E Q R R A L E E L C C R R K P G R C I T T S K L
2100 TCCATAAGCTCGTGTGCTCCGAGACACCTGCAGTCTCTCTGCTTTACCAGGATCCCTTGTGGTGTGGGGAAGAGGCCACCAACAGCAGGCTGCG
513▶ F H K L V L S R D T L Q L L L L Y Q D P L L V L G E E A T N S R L R

BspEI (2291)
2200 ACACCGTGTACAGGTGCTATGCCACCTGGCGTTCGGCTCCAGGACATGGCCGACTTTGCCATTCTGCCAGCTGTGCCGCTGGAGGATCCGGAAG
546▶ H R A Y R C Y A T W R F G S Q D M A D F A I L P S C C R W R I R K

NheI (2367)
2300 GAGTCCCAAGACCGAGGGCAGTATAGTGGCTTCAAGTATCCCTACTGATGGTACGGCTGCCACATGCTAGCTGGCCAGACATGATAAGATACATTGA
580▶ E F P K T E G Q Y S G F K Y P Y •

XcmI (2361) **MscI (2373)**
2400 TGAGTTTGACAAACCACAACACTAGAATGCAGTGAATAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAAT

HpaI (2505) **MfeI (2516)**
2500 AAACAAGTTAAACAACAACATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTA

EcoRI (2601)
 2600 TGG AATTC TAAAATACAGCATAGCAAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCT
 2700 GTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAGTGATTTTTCCCAAGGTTTGAAGTCTTTCATTCTTTA

SspI (2840) **SwaI (2854)**
 2800 TGT TTTAAATGCACTGACCTCCACATTCCCTTTT TAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGC
 2900 AGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAAATGGACAGCAAGAAAGCG

3000 AGCTTCTAGCTTTAGTTCCTGGTACTTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCACAAGCAGTCAG
 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
SacI (3115) **BstXI (3144)**
 3100 GAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCCCTGATGGACTGTGCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAAT
 111 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 H R V A V I

StuI (3279)
 3200 GGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTACGACAGACAGTACCTGCCAATGTAGGCCTCAATGTGGACAGCA
 78 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 A E I H V A
 3300 GAGATGATCTCCAGTCTTGGTCTGATGGCCGCCGACATGGTGTCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCT
 44 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 T A V E V L E

BspHI (3429) **BbsI (3425)** **AseI (3487)**
 3400 CCAGATCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAA
 11 L D Q Q S I N F T K M

SacI (3544)
 3500 AACAGCGTGATGGCGTCTCCAGCTTATCTGACGGTCACTAACGAGCTCTGTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCGTCAA

SpeI (3642)
 3600 TGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGT

SnaBI (3770)
 3700 GAGTCAAACCGCTATCCACGCCATTGATGTA CTGCAAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGT

NdeI (3875)
 3800 CCCATAAGGTCATGTA CTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTA CTGC
 3900 CAAGTGGGCA GTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGT TACTATGGGAACATACGTCATTATTGACGTCAATGGG

PacI (4061) **SdaI (4053)** **BspLU11I (4071)**
 4000 CGGGGGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGAGGTTAATTAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGC
 4100 CAGGAACCGTAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC
 4200 CCGACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTC
 4300 TCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCC
 4400 CGTTCAGCCCGACCGCTGCGCTTATCCGGTAACTATCGTCTT GAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG
 4500 ATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGC
 4600 TGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGGAAGCAGCAGATTAC
 4700 GCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCT

EagI (4821)
PacI (4801) **SwaI (4810)** **NotI (4820)**
 4800 AGTTAATTAACATTTAAATC AGCGGCGCAATAAAATATCTTTATTTT CATTACATCTGTGTGTTGGTTTTTTGTGGAATCGTAACTAACATACGCTCT
 4900 CCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTATCGAA