



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82)
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCGCCCTACCTGAGGCC
PvuII (239)
Bsu36I (291)
301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

AgeI (552) **BspLU11I (560)**
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGTCAACATGTCCAGAGCAGGCACCGCGCCGAGGCCCGCCGCT
1▶ M S Q S R H R A E A P P L

BbsI (693)
601 GGAGCGGAGGACAGTGGGACCTTCAGTTTGGGAAGATGATAACAGCTAAGCCAGGAAAACACCGATTGAGTATTACAGAAATACGGCATGAAGACC
13▶ E R E D S G T F S L G K M I T A K P G K T P I Q V L H E Y G M K T

BglIII (727) **BbrPI (745)**
701 AAGAACATCCCAGTTTATGAATGTGAAAGATCTGATGTGCAAAATACAGTGCACCTTACCTTTCAGAGTAACCGTTGGTGACATAACCTGCACAGGTG
47▶ K N I P V Y E C E R S D V Q I H V P T F T F R V T V G D I T C T G

BstAPI (835)
PstI (833)
801 AAGGTACAAGTAAGAAGCTGGCGAAACATAGAGCTGCAGAGGCTGCCATAAACATTTTAAAGCCAATGCAAGTATTTGCTTTCAGTTTCTGACCCCTT
80▶ E G T S K K L A K H R A A E A A I N I L K A N A S I C F A V P D P L
901 AATGCCTGACCCCTTCAAGCAACCAAAGAACCAGCTTAATCCTATTGGTTTATTACAGGAATTGGCTATTTCATCATGGCTGGAGACTTCTGAATATACC
113▶ M P D P S K Q P K N Q L N P I G S L Q E L A I H H G W R L P E Y T
1001 CTTTCCAGGAGGAGGACCTGCTCATAAGAGAGAATACTACAATTTGACGCTAGAGTCAATTTATGAAACTGGAAAGGGGGCATCAAAAAAGCAAG
147▶ L S Q E G G P A H K R E Y T T I C R L E S F M E T G K G A S K K Q

SspI (1141)
1101 CAAAAAGGAATGCTGCTGAGAAATTTCTTGCCAAATTTAGTAATTTCTCCAGAGAACCACATTTCTTAAACAAATGTAGTAGGACATTCTTTAGGATG
180▶ A K R N A A E K F L A K F S N I S P E N H I S L T N V V G H S L G C

EcoRI (1218) **PvuII (1288)**
1201 TACTTGGCATTCTTGAGGAATTCCTGGTAAAAGATCAACTACTGAAAAGAAGCCTCCTTAGTATTCCAAATACAGATTACATCCAGCTGCTTAGT
213▶ T W H S L R N S P G E K I N L L K R S L L S I P N T D Y I Q L L S
1301 GAAATTGCCAAGGAACAAGGTTTAAATATAACATATTTGGATATAGATGAACTGAGCGCAATGGACAATATCAATGTCTTGTGAACTGTCCACCAGCC
247▶ E I A K E Q G F N I T Y L D I D E L S A N G Q Y Q C L A E L S T S

DraIII (1442)
1401 CCATCACAGTCTGTGATGGCTCCGGTATCTCCTGTGGCAATGCACAAAGTGTGAGCTCACAATGCTTTGAGTATTTAAAGATAATAGCAGAAAGAAA
280▶ P I T V C H G S G I S C G N A Q S D A A H N A L Q Y L K I I A E R K

MscI (1529) **NheI (1523)**
1501 GTAAATCTGGAGCAACTTAAAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTT
313▶ •

HpaI (1661) **MfeI (1672)**
1601 TATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTATGTTTCAGTT

EcoRI (1757)
1701 CAGGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAATACAGCATAGCAAACTTTAACCTCCAATCA
1801 AGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATG

SapI (1939) **SspI (1996)**
1901 GAGTTTAAAGATATAGTGTATTTTCCCAAGTGTGAACTAGCTCTTCATTTCTTTATGTTTTAAATGACTGACCTCCACATTCCTTTTATAGTAAAAATA

SwaI (2010)
2001 TTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGT
2101 AGTTGGACTTAGGGAACAAGGAACCTTTAATAGAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTTGAGGGGATGAGTTCC
141▶ • N R T Y K L P I L E

SacI (2271)
2201 TCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGA
129▶ 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 C P S V

BstXI (2300)
2301 CCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCGTTGCTCACAGCAGACCCAATGGC
96▶ 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 S G I A

2401 AATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGG
63 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 A G V H
StuI (2435)

2501 TGCTTGTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCC
29 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
BbsI (2581)
XmnI (2577)

2601 TATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAAC
AseI (2643)

2701 GAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTACGACATTTGGAAAGTCCCCTTGATTAC
SacI (2700) SpeI (2798)

2801 TAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGC
SnaBI (2926)

2901 ATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGTCACTGACTGGGCATAATGCCAGGCGGGCCATTAC
NdeI (3031)

3001 CGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATG
3101 GAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGT

3201 TATGTAACGCGCTGCAGGTTAAITTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCT
PacI (3217)
PstI (3210)
SdaI (3209)
BspLU11I (3227)

3301 CCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAGTCC
3401 CTCGTGCGCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGT

3501 ATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCAGCGCTGCGCTTATCCGGTAACTATCGTCTTGA
3601 GTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAG
3701 TGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCG
3801 GCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTAC

3901 GGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTAT
EagI (3977)
PacI (3957) SwaI (3966) NotI (3976)

4001 TTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGT
4101 CCCAGTGCAAGTGACGGTGCCAGAACATTTCTCTATCGAA