



PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCAGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) **AgeI (552)** **Bsp120I (564)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCCCTACCTGAGATCACCGGTCAACCATGGCCCTGGAGCTCGCAGACAGGGCAGGATTGTGCA
601 GGAAGGCCTGAGATGTGCTTCTGCCACCCCTACCCACTCCCTCCCTTTCGGATCTTAACACTGGGCACTCACACACCCACCCCATGCTCCTCTCCA
13▶ G R P E M C F C P P P T P L P P L R I L T L G T H T P T P C S S P

Bsp120I (751)
XmaI (747)
SmaI (747)
SnaBI (714) **NcoI (725)**
701 GGCTCAGCAGCAGGTACGTACCAACCATGGGCTCGCAGGCCCTGCCCGGGGCCATGCAGACCCCTCATCTTTTTCGACATGGAGGCCACTGGCTTGC
47▶ G S A A G T Y P T M G S Q A L P P G P M Q T L I F F D M E A T G L
801 CTTTCTCCAGCCCAAGGTCACGGAGCTGTGCCTGTCCACAGATGTGCCCTGGAGAGCCCCCACCTCTCAGGGCCACCTCCACAGTTCC
80▶ P F S Q P K V T E L C L L A V H R C A L E S P P T S Q G P P P T V P
DraIII (905) **PvuII (992)**
901 TCCACCACCGCTGTGGTAGACAAGCTCTCCCTGTGTGTGGCTCCGGGAAGGCTGCAGCCCTGCAGCCAGCGAGATCACAGGTCTGAGCACAGCTGTG
113▶ P P P R V V D K L S L C V A P G K A C S P A A S E I T G L S T A V

KasI (1064)
1001 CTGGCAGCGCATGGCGTCAATGTTTTGATGACAACCTGGCCAACTGCTCCTAGCCTTCTGCGGGCCAGCCACAGCCCTGGTGCCTGGTGGCACACA
147▶ L A A H G R Q C F D D N L A N L L L A F L R R Q P Q P W C L V A H
BstEII (1102)
1101 ATGGTGACCCTACGACTTCCCCCTGCTCCAAGCAGAGCTGGCTATGTGGGCTCACAGTGTCTGGATGGTGCCTTCTGTGTGGATAGCATCACTGC
180▶ N G D R Y D F P L L Q A E L A M L G L T S A L D G A F C V D S I T A
AvrII (1260)
1201 GCTGAAGGCCCTGGAGCGAGCAAGCAGCCCTCAGAACACGGCCCAAGGAAGAGCTACAGCCTAGGCAGCATCTACACTCGCCTGTATGGGCAGTCCCCT
213▶ L K A L E R A S S P S E H G P R K S Y S L G S I Y T R L Y G Q S P
1301 CCAGACTCGCACCGCTGAGGGTGTATGCTGCTGCGCCTGCTCAGCATCTGTGAGTGGAGACCACAGCCCTGCTGCGGTGGTGGATGCTCAGCCAGGC
247▶ P D S H T A E G D V L A L L S I C Q W R P Q A L L R W V D A H A R
XcmI (1475)
1401 CTTTCGGCACCATCAGGCCCATGTATGGGGTACAGCCTCTGCTAGGACCAAGCCAAGACCATCTGCTGTCAACCACTGCACACCTGGCCACAACCAG
280▶ P F G T I R P M Y G V T A S A R T K P R P S A V T T T A H L A T T R

SpeI (1504)
Asp718I (1531)
Acc65I (1531)
1501 GAACACTAGTCCCAGCCTTGGAGAGAGCAGGGTACCAAGGATCTTCTCCAGTGAAGACCCTGGAGCCCTATCCAGGGAGGGGCTGCTGGCCCCACTG
313▶ N T S P S L G E S R G T K D L P P V K D P G A L S R E G L L A P L
XcmI (1610)
1601 GGTCTGCTGGCCATCCTGACCTTGGCAGTAGCCACACTGTATGGACTATCCCTGGCCACACTGGGGAGTAGGCAAGAAGGAAAATCTGACGAATAAAG
347▶ G L L A I L T L A V A T L Y G L S L A T P G E •
NheI (1710)
1701 ACCCCCGCTGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATT

HpaI (1848) **MfeI (1859)**
1801 TGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTCATTCTTTATGTTTCAGGTTTCAGGGGGAGGTGT

EcoRI (1944)
1901 GGGAGGTTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGA
2001 ATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATGGAGTTAAGATAT

SspI (2183) **SwaI (2197)**
2101 AGTGATTTTCCCAAGGTTTGAAGTCTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAAATTCAGAAATAATT
2201 TAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGG
2301 GAACAAAGGAACCTTTAATAGAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGAGGGGATGAGTTCTCAATGGTGGTTT
141▶ • N R T Y K L P I L E E I T T K
2401 TGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCTGATGGA
125▶ 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 V R I S

2501 TCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCA
92 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 I A E A
2601 CAGACAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTGCTCT
58 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 H K N D E

BspHI (2772)
XmnI (2764)

2701 CATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGT
25 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

VspI (2830)
AseI (2830)

2801 ATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTA

SpeI (2985)

2900 TATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTGGATTTACTAGTCAAACA
2999 AACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGT

SnaBI (3113)

3099 AATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGTACTGGGCATAATGCCAGCGGGCCATTTACCGTCATTGACG

NdeI (3218)

3199 TCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTA

SdaI (3396)

3299 TTGGCGTACTATGGAAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGC

PacI (3404) BspLU11I (3414)

3398 CTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAGGCCGCTTGGCTGGCGTTTTCCATAGGCTCCGCCCCC
3496 CTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCG
3596 CTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGT

ApaLI (3728)

3696 TCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACC
3796 CCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCC
3896 TAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAA
3996 ACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTG

EagI (4164)
PacI (4144) SwaI (4153) NotI (4163)

4096 ACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAAATATCTTTATTTTCATT
4195 ACATCTGTGTGTTGGTTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGT
4295 GCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA