



100

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

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

NgoMIV (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

KasI (535) **AgeI (552)** **NcoI (560)**
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGGAGTCCGAATCGGAAAGCGGGGCTGCTGCTGACAC
▶ ▶ ▶ M E S E S E S G A A A D T

NcoI (624) **HindIII (618)** **RsrII (666)**
601 CCCCCACTGGAGACCCTAAGCTTCCATGGTGATGAAGAGATTATCGAGGTGGTAGAAGTTCAGTCCCGGTCCGCGGACCCAGATGACCTGGCCAGGAG
13▶ P P L E T L S F H G D E E I I E V V E L D P G P P D P D D L A Q E
701 ATGGAAGATGTGGACTTTGAGGAAGAAGAGGAGGAAGAGGGCAACGAAGAGGGCTGGTTCTAGAACCAGGAGGGTGGTGGCAGCATGGAGGGCC
XbaI (759) **Bsp120I (795)**
47▶ M E D V D F E E E E E E E G N E E G W V L E P Q E G V V G S M E G
801 CCGACGATAGCGAGGTACCTTTGCATTGCACTCAGCATCTGTGTTTTGTGTGAGCCTGGACCCCAAGACCAATACCTTGGCAGTGACCGGGGTGAAGA
80▶ P D D S E V T F A L H S A S V F C V S L D P K T N T L A V T G G E D
901 TGACAAAGCCTTCGTATGGCGGCTCAGCGATGGGGAGCTGCTCTTTGAGTGTGCAGGCATAAAGACTCTGTGACTTGTGCTGGTTTCAGCCATGACTCC
113▶ D K A F V W R L S D G E L L F E C A G H K D S V T C A G F S H D S
1001 ACTCTAGTGGCCACAGGGACATGAGTGGCCTCTTGAAGTGTGGCAGGTGGACACTAAGGAGGAGGTCTGGTCTTTGAAGCGGGAGACCTGGAGTGA
147▶ T L V A T G D M S G L L K V W Q V D T K E E V W S F E A G D L E W

SmaI (1197)
1101 TGGAGTGGCATCCTCGGCACCTGTCTGTTGGCGGGCACAGCTGACGGCAACACCTGGATGTGAAAGTCCCAGTGGTGGTGAAGACCTTCCAGGG
180▶ M E W H P R A P V L L A G T A D G N T W M W K V P N G D C K T F Q G
1201 TCCCAACTGCCAGCCACCTGTGGCCGAGTCTCCCTGATGGGAAGAGAGCTGTGGTAGGCTATGAAGATGGGACCATCAGGATTTGGGACCTGAAGCAG
213▶ P N C P A T C C G R V L P D G K R A V V G Y E D G T I R I W D L K Q

Bsp120I (1341)
1301 GGAAGCCCTATCCATGTACTGAAAGGACTGAGGGTACCAGGGCCACTCACCTGTGTTGCTGCCAACCAGGATGGCAGCTTGATCCTAACTGGCTCTG
247▶ G S P I H V L K G T E G H Q G P L T C V A A N Q D G S L I L T G S

XcmI (1430)
1401 TGGACTGCCAGGCCAAGCTGGTCACTGACCCAGCCGCAAGGTGGTGGTGTGTTTTAGACTGAGACTGTGGCCTCCCAGCCAGCCTGGGAGAAGGGGA
280▶ V D C Q A K L V S A T T G K V V G V F R P E T V A S Q P S L G E G E

XcmI (1586)
1501 GGAGAGTGAAGTCCAAGTCCGTTGGAGTCTTGGGCTTCTGCAGTGTGATGCCCCCTGGCAGCTGTGGCTACCTGGATGGGACCTTGGCCATCTATGACCTG
313▶ E S E S N S V E S L G F C S V M P L A A V G Y L D G T L A I Y D L
1601 GCTACGCAGACTCTTAGGCATCAGTGTGACACAGTCCGGCCTGCTGCAGCTGCTGTGGGAGGCAGGCACTCCGCTGGTATATACCTGCAGCCTGGATG
347▶ A T Q T L R H Q C Q H Q S G I V Q L L W E A G T A V V Y T C S L D

EagI (1728)
RsrII (1723)
1701 GCATCGTGCCTCTGGGAGCCCGGACCGGCCCTGTTACTGACTACCGGGCCACACGGCTGAGATCCTGGACTTTGCCCTCAGCAAAGATGCCTC
380▶ G I V R L W D A R T G R L L T D Y R G H T A E I L D F A L S K D A S

Tth11I (1809) **StuI (1852)**
1801 CCTGGTGGTGACACGTCAGGAGACCACAAAGCAAAGTATTTTGTGTCCAAAGCCGACCTGACCTTAATGGCTGCAGCCCTGCCTGTGTGCTGGTGTG
413▶ L V V T T S G D H K A K V F C V Q R P D R •

NheI (1907)
1901 AGGGGACGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGT

HpaI (2045) **MfeI (2056)**
2001 GATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAACATTGCATTCAATTTATGTTTCAGGTTACAGGGGAGGTGTGGG

EcoRI (2141)
2101 AGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTAAACCTCAAATCAAGCCTCTACTTGAATC
▶ ▶

2201 CTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGT

SspI (2380) **SwaI (2394)**
2301 GTATTTTCCCAAGGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCAGTACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAA
2401 ATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAA
2501 CAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGA
▶ ▶ ▶ N R T Y K L P I L E E I T T K V

SacI (2655)

2601 CCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCCTGATGGATCT
124 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 R
2701 GTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCAGCAGACCCCAATGGCAATGGCTTCAGCACAG
91 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 C

StuI (2819)

2801 ACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCCTCAT
57 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 Y

BspHI (2969)

XmnI (2961)

2901 AGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTATT
24 L M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (3027) SacI (3084)

3001 ATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTAT

SpeI (3182)

3100 AGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAAC
3199 TCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGTTAAT

SnaBI (3310)

3299 AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGTCAATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCA

NdeI (3415)

3399 ATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTG

SdaI (3593)

3499 GCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTG

PacI (3601) BspLU11I (3611)

3598 C A G G T T A A T T A A G A A C A T G T G A G C A A A A G C C A G A A A A G C C A G G A A C C G T A A A A A G C C G G T T G C T G G C G T T T T T C C A T A G G C T C C G C C C C C T G
3696 A C G A G C A T C A C A A A A T C G A C G C T C A A G T C A G A G G T G G C G A A A C C G A C A G G A C T A T A A G A T A C C A G G C G T T T C C C C T G G A A G C T C C C T C G T G C G C T C
3796 T C C T G T T C C G A C C C T G C C G T T A C C G G A T A C T G T C C G C T T T C C C T T C G G A A G C G T G G C G C T T T C T A T A G C T C A C G C T G T A G G T A T C T C A G T T C G

ApaLI (3925)

3896 G T G T A G G T C G T T C G C T C C A A G C T G G G C T G T G T G C A C G A A C C C C C G T T C A G C C C G A C C G T G C G C T T A T C C G T A A C T A T C G T C T T G A G T C C A A C C G G
3996 T A A G A C A C G A C T T A T C G C C A C T G G C A G C A G C C A C T G G T A A C A G G A T T A G C A G A G C G A G G T A T G T A G G C G G T G C T A C A G A G T T C T T G A A G T G G T G G C C T A A
4096 C T A C G G C T A C A C T A G A A A C A G A T T T T G G T A T C T G C G C T G C T G A A G C A G T T A C C T T C G G A A A A G A G T T G G T A G C T C T T G A T C C G G C A A A C A A C C
4196 A C C G C T G G T A G C G G T G G T T T T T G T T T G C A A G C A G A T T A C G C G C A G A A A A A A G G A T C T C A A G A A G A T C C T T T G A T C T T T T C T A C G G G T C T G A C G

EagI (4361)

PacI (4341) SmaI (4350) NotI (4360)

4296 C T C A G T G G A A C G A A A A C T C A C G T T A A G G G A T T T T G G T C A T G G C T A G T T A A T T A A C A T T T A A A T C A G C G C C G C A A T A A A A T A T C T T T A T T T T C A T T A C A T

4396 C T G T G T T G T T T T T T G T G T A A T C G T A A C T A A C A T A C G C T C C A T C A A A C A A A C G A A A C A A A C A A A C T A G C A A A A T A G G C T G T C C C C A G T G C A A
4496 G T G C A G G T G C C A G A A C A T T T C T C T A T C G A A