



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

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** *BspHI (560)*
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCATCATGACTGCAAAGATGAAACGACCTTCTACGACGATGC
601 CCTCAACGCTCGTTCCTCCAGTCCGAGAGCGGTGCTACGGCTACAGTAACCCCTAAAGATCCTAAAACAGAGCATGACCTTGAACCTGGCCGACCCGGTG
130▶ L N A S F L Q S E S G A Y G Y S N P K I L K Q S M T L N L A D P V
701 GGCAGTCTGAAGCCGACCTCCGCGCAAGAAGTCCGACCTTCTCACGTGCCCCGACGTGGGCTGCTCAAGTGGCGTCCGCGAGCTGGAGCGCTGA
47▶ G S L K P H L R A K N S D L L T S P D V G L L K L A S P E L E R L

XcmI (804)
801 TCATCCAGTCCAGCAATGGGCACATCACCACTACACCGACCCCAACCCAGTTCTGTGCCCAAGAAGTGCACGACGAGCAGGAGGGCTTCGCCGAGGG
80▶ I I Q S S N G H I T T T P T P T Q F L C P K N V T D E Q E G F A E G

BssHII (906)
901 CTTCTGCGCGCCCTGGTGAAGTGCATAGCCAGAACACGCTTCCAGTGTCACTCCGCGGCACAGCCGGTCAAGCGGGCGGGCATGGTGGCTCCCGCG
113▶ F V R A L A E L H S Q N T L P S V T S A A Q P V S G A G M V A P A

XmaI (1092)
1001 GTGGCCTCAGTAGCAGGCGTGGCGGGGTTGGTGGCTACAGCGCCAGCCTGCACAGTGAAGCTCCGGTCTACGCCAACCTCAGCAACTCAACCCGGGTG
147▶ V A S V A G A G G G G G Y S A S L H S E P P V Y A N L S N F N P G

SfiI (1137)
KasI (1119) **EagI (1136)**
1101 CGCTGAGCAGCGGGTGGGGCGCCCTCCTATGGCGGGCGGGTGGCTTTTCCCTCGCAGCCGAGCAGCAGCAGCAGCCGCTCAGCCGCCACCA
180▶ A L S S G G G A P S Y G A A G L A F P S Q P Q Q Q P P Q P P H H
1201 CTTGCCCAACAGATCCCGGTGCAGCACCCGCGGTGCAAGCCCTGAAGGAAGAGCCGAGACCGTGGCGGAGATGCCGGGAGAGACCGCCCTGTCC
213▶ L P Q Q I P V Q H P R L Q A L K E E P Q T V P E M P G E E T P P L S
1301 CCTATCGACATGGAGTCTCAGGAGCGGATCAAGGCAGAGAGGAAGCGCATGAGGAACCGCATTGCCGCTCCAAGTGGCGGAAAGGAAGCTGGAGCGGA
247▶ P I D M E S Q E R I K A E R K R M R N R I A A S K C R K R K L E R
1401 TCGCTCGGCTAGAGGAAAAGTAAAACCTTAAAAGCGCAAACTCCGAGCTGGCATCCACGGCAACATGCTCAGGGAACAGGTGGCACAGCTTAAGCA
280▶ I A R L E E K V K T L K A Q N S E L A S T A N M L R E Q V A Q L K Q

XcmI (1512) **HpaI (1516)** **Psp1406I (1557)** **NheI (1588)** **MscI (1594)**
1501 GAAAGTCATGAACCACGTTAACAGTGGGTGCCAACTCATGCTAACGCAGCAGTTGCAAACTTTTGGAAACAGACTGTGAGGGCTGAGGCTAGCTGGCCA
313▶ K V M N H V N S G C Q L M L T Q Q L Q T F •
1601 GACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTG

HpaI (1726) **MfeI (1737)**
1701 TAACCATTATAAGCTGCAATAAACCAAGTTAACCAACAACATTGCATTATTTATGTTTCAGGTTTCAGGGGAGGTGGGAGGTTTTTAAAGCAAGTA

EcoRI (1822)
1801 AAACCTCTACAAATGTGGTATGGAATTCAAAAACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATA
1901 AGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGA

SspI (2061) **SwaI (2075)**
2001 ACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGAAAAATTTTCAAGAAATTAATTAATACATCATTGCAATGAAA

EcoO109I (2136)
2101 AATAATGTTTTTATTAGGAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGAACAAGAACCTTTAATAGA

SacI (2336) **BstXI (2365)**
2201 AATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTATCTC
141▶ N R T Y K L P I L E E I T T K V L K G N M E
2301 AATGAGCACAAAGCAGTCAAGGAGCATAGTCAAGATGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAG
118▶ 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 D V E D S Y
2401 GGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTACGACAGACAGTGCCTGCCAATGT
84▶ 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 V T V R G I Y

StuI (2500)
2501 AGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTGTCTGTTGCTCCTCATAGAGCATGGTATCTTCTC
51▶ 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 L M T I K E

BspHI (2650)

BbsI (2646)

XmnI (2642)

2601 AGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTA
 18 T A V E V L E L D Q Q S I N F T K M

AseI (2708) **SacI** (2765)

2701 TGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGC

SpeI (2863)

2801 CTACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCATTGACGTCAATGGGG

SnaBI (2991)

2900 TGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCGATCATCATGTTAATAGCGATGACTAATACGTAGA

NdeI (3096)

3000 TGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGGCGGCTGGGCGGCGCCATTTACCGTCAATTGACGTCAATAGGGGGCTACTTGGCAT

3100 ATGATACACTTGATGTAAGTGGGCGGAGTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATAC

PstI (3275) **SdaI** (3274)**PacI** (3282) **BspLU11I** (3292)

3200 GTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA TTAAGAACATG
 C C T G C A G G T T A A T T A A G A A C A T G

3298 TGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGAC

3398 GCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGCT

3498 TACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAG

ApaLI (3606)

3598 CTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTGTCGAACCCGGAAGACACGACTTATCGCCAC

3698 TGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAC

3798 AGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTT

3898 TTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCAC

EagI (4042)

PacI (4022) **SwaI** (4031) **NotI** (4041)

3998 GTTAAGGGATTTTGGTCAATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTTGTG

4098 GAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGAAGTGCAGGTGCCAGAACATTTTC

4198 TCTATCGAA