



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

HindIII (245) **Bsu36I (291)**
Psp1406I (203) PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTACCATTGGCAACTGTTCTGAACTCAACTGTGAAATGCCACC
601 TTTTGACAGTGATGAGAATGACCTGTTCTTTGAAGTTGACGGACCCCAAAAGATGAAGGGCTGCTTCCAAACCTTTGACCTGGGCTGTCTGATGAGAGC
13▶ F D S D E N D L F F E V D G P Q K M K G C F Q T F D L G C P D E S
701 ATCCAGCTTCAAATCTCGCAGCAGCACATCAACAAGAGCTTCAGGCAGCAGTATCACTATTGGCTGTGGAGAAGCTGTGCAGCTACCTGTGCTT
47▶ I Q L Q I S Q Q H I N K S F R Q A V S L I V A V E K L W Q L P V S

SapI (856)
801 TCCCGTGGACCTTCCAGGATGAGGACATGAGCACCTTCTTTCTTTCATCTTTGAAGAAGAGCCATCCTCTGTGACTCATGGGATGATGATAACCT
80▶ F P W T F Q D E D M S T F F S F I F E E E P I L C D S W D D D D N L

NdeI (980) **BstXI (999)**
901 GCTGGTGTGTGACGTTCCATTAGACAACCTGACTACAGGCTCCGAGATGAACAACAAAAAGCCTCGTGTGCTGGACCCATATGAGCTGAAAGCTCTC
113▶ L V C D V P I R Q L H Y R L R D E Q Q K S L V L S D P Y E L K A L

BsrGI (1050)
1001 CACCTCAATGGACAGAATATCAACCAACAAGTGATATTCTCCATGAGCTTTGTACAAGGAGAACCAAGCAACGACAAAATACCTGTGGCCTTGGGCCTCA
147▶ H L N G Q N I N Q Q V I F S M S F V Q G E P S N D K I P V A L G L

PvuII (1153)
1101 AAGGAAAGAACTATACCTGTCTGTGAATGAAAGACGGCACACCCACCTGCAGCTGGAGAGTGTGGATCCCAAGCAATCCCAAGAAAGAAGATGGA
180▶ K G K N L Y L S C V M K D G T P T L Q L E S V D P K Q Y P K K K M E
1201 AAAACGGTTTGTCTTCAACAAGATAGAAGTCAAGAGCAAAGTGGAGTTTGTGAGTCTGCAGAGTTCCCAACTGGTACATCAGCACCTCACAAGCAGAGCAC
213▶ K R F V F N K I E V K S K V E F E S A E F P N W Y I S T S Q A E H

MscI (1378)
NheI (1372)
1301 AAGCCTGTCTTCTGGGAAACAACAGTGGTCAGGACATAATTGACTTCACAATGGAATCTGTGTCTTCTAAGCTAGCTGGCCAGACATGATAAGATACA
247▶ K P V F L G N N S G Q D I I D F T M E S V S S •
1401 TTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTGTGAAATTTGTGATGCTATTGCTTTATTGTAACCATTATAAGCTG

HpaI (1510) MfeI (1521)
1501 CAATAAACAAGTTAAACAACAATTGCATTCTTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGT

EcoRI (1606)
1601 GGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGG

SapI (1788)
1701 GGCTGTTGCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAACCTAGCTCTTCATTT

SspI (1845) **SwaI (1859)**
1801 TTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATT

EcoO109I (1920)
1901 AGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAA

BstXI (2149)
2001 AGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAG
144▶ • 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

SacI (2120)
2101 TCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGTGAGTCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCA
112▶ 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 P H R V A V

StuI (2284)
2201 CAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCTGCCAATGTAGGCTCAATGTGGAC
79▶ 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 A E I H V

XmnI (2426) **AseI (2492)**
2301 AGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTGTGTTGCTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACC
46▶ 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 T A V E V
2401 AGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCAATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTG
12▶ L E L D Q Q S I N F T K M

2501 TCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACGCCCATTTGCG
SacI (2549)

2601 TCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTGATTTACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCC
SpeI (2647)

2701 CCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGA
SnaBI (2775)

2801 AAGTCCATAAAGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA
NdeI (2880)

2901 CTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAA

3001 TGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAA
PacI (3066) SdaI (3058) BspLU11I (3076)

3101 AGGCCAGGAACCGTAAAAAGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCG
BspLU11I (3076)

3201 AAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCC

3301 TTTCTCCCTTCGGAAGCGTGGCGTTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTTCGCTCCAAGCTGGGCTGTGTGCACGAAC
ApaLI (3390)

3401 CCCCCTTACGCCGACCCTGCGCCTTATCCGGTAACTATCGTCTTGAAGTCCAAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAA

3501 CAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCT

3601 CTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGA

3701 TTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCAT

3801 GGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTTGTGTAATCGTAACATAACG
PacI (3806) SmaI (3815) EagI (3826) NotI (3825)

3901 CTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA