



PvuI (7)
SgfI (6) **MfeI (82)** **EcoNI (96)**
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
PvuII (239) **EcoNI (287)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCCTCCCGCCTGTGGTGCCTCTGAAGCTCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

SphI (560)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCAGCATGCTGGGCATCTGGACCCCTACCTCTGTTCTTAC
1 M L G I W T L L P L V L T

BstXI (656)
601 GTCTGTTGCTAGATTATCGTCCAAAAGTGAATGCCAAAGTACTGACATCAACTCCAAGGATTGGAATTGAGGAAGACTGTTACTACAGTTGAGACT
13 S V A R L S S K S V N A Q V T D I N S K G L E L R K T V T T V E T

StuI (711) **MscI (726)**
701 CAGAACTTGAAGGCCTGCATCATGATGGCCAATTCTGCCATAAGCCTGTCCTCCAGGTGAAAGGAAAGCTAGGGACTGCACAGTCAATGGGGATGAAC
47 Q N L E G L H H D G Q F C H K P C P P G E R K A R D C T V N G D E
801 CAGACTGCGTGCCCTGCCAAGAAGGGAAGTACACAGACAAAAGCCATTTTCTTCCAAATGCAGAAGATGTAGATTGTGTGATGAAGGACATGGCTT
80 P D C V P C Q E G K E Y T D K A H F S S K C R R C R L C D E G H G L
901 AGAAGTGGAAATAAACTGCACCCGACCCAGAATACCAAGTGCAGATGTAACCAAACTTTTTTGTAACTCTACTGTATGTGAACACTGTGACCCCTTG
113 E V E I N C T R T Q N T K C R C K P N F F C N S T V C E H C D P C

BglIII (1072)
BsaBI (1067)
BamHI (1066)
DraIII (1047)
1001 ACCAAATGTGAACATGGAATCATCAAGGAATGCACACTCACCAGCAACACCAAGTGCAAAAGAGGAAGGATCCAGATCTAACTGGGGTGGCTTTGTCTTC
147 T K C E H G I I K E C T L T S N T K C K E E G S R S N L G W L C L
1101 TTCTTTTCCAATTCCACTAATTGTTGGGTGAAGAGAAAAGGAAGTACAGAAAACATGCAGAAAAGCAGAAAAGCAAGGTTCTCATGAATCTCC
180 L L L P I P L I V W V K R K E V Q K T C R K H R K E N Q G S H E S P
1201 AACCTTAAATCCTGAAACAGTGGCAATAAATTTATCTGATGTTGACTTGAGTAAATATATCACCCTATTGCTGGAGTATGACACTAAGTCAAGTAAA
213 T L N P E T V A I N L S D V D L S K Y I T T I A G V M T L S Q V K

BstBI (1307)
Bsp119I (1307) **Tth111I (1354)**
1301 GGCTTTGTTGAAAGAATGGTGCAATGAAGCCAAAATAGATGAGATCAAGAATGACAATGTCCAAGACACAGCAGAACAGAAGTTCAACTGCTTCGTA
247 G F V R K N G V N E A K I D E I K N D N V Q D T A E Q K V Q L L R

BglIII (1449)
1401 ATTGGCATCAACTTCATGAAAAGAAAGAAGCGTATGACACATTGATTAAGATCTCAAAAAGCCAATCTTTGTACTCTTGACAGAAAAATTCAGACTAT
280 N W H Q L H G K K E A Y D T L I K D L K K A N L C T L A E K I Q T I

SpeI (1516) **HindIII (1557)** **XbaI (1565)** **MscI (1581)** **NheI (1575)**
1501 CATCTCAAGGACATTACTAGTACTCAGAAAATTCAACTTCAGAAAATGAAATCCAAGCTTGCTAGAGTCTAGAGTCTAGCTGAGCTAGCTGACATGATAAGAT
313 I L K D I T S D S E N S N F R N E I Q S L V •
1601 ACATTGATGAGTTTGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAG

HpaI (1713) **MfeI (1724)**
1701 CTGCAATAAAACAAGTTAAACAACAACAATTGCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAAACCTCTACAAA

EcoRI (1809)
1801 TGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATC

SapI (1991)
1901 AGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTCTTCAT

SspI (2048) **SwaI (2062)**
2001 TTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTGAGAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTT

EcoO109I (2123)
2101 ATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATGGACAGCAA

2201 GAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAG
141 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

SacI (2323) **BstXI (2352)**
2301 CAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAG
113 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 P H R V A

StuI (2487)
2401 CCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTG
80 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 A E I H

2501 GACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCC
 47 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 T A V E

XmnI (2629)

2601 ACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTA
 13 V L E L D Q Q S I N F T K M

SaeI (2752)

2701 TTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATT

SpeI (2850)

2801 GCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATGACGTCAATGGGGTGGAGACTTGAAA

SnaBI (2978)

2901 TCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTA

NdeI (3083)

3001 GGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGAT

3101 GTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGT

PacI (3269)

PstI (3262)

SdaI (3261)

BspLU11I (3279)

3201 CAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGC

3301 AAAAGGCCAGGAACCGTAAAAAGCCGCTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTG

3401 GCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCC

ApaLI (3593)

3501 GCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCAGC

3601 AACCCCCGTTGAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAAGTCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGG

3701 TAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAGTATTTGGTATCTGC

3801 GCTCTGTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGC

3901 AGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGT

EagI (4029)

PacI (4009) SwaI (4018) NotI (4028)

4001 CATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACAT

4101 ACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA