



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

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BspHI (560)
KasI (535) **AgeI (552)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCATCATGAGTGAGGTCAACCGGAATCTCTGGAAGCGATCCT
1▶ M S E V N R E S L E A I L

NdeI (658)
PvuII (604) **BstXI (653)**
601 TCCACAGCTGAAGTGCCATTTACCTGGAATTTATTTCAGGGAAGGAAGTATGTCCAGTCATATGGAAGACAGGGTGTGCAACCAGGTCGAACATTTAAAC
13▶ P Q L K C H F T W N L F R E G S M S S H M E D R V C N Q V E H L N
701 TCTGAGGAGAAGGCAACAATGTATGACTTATTGGCCTACATAAAGCACCTAGATGGCGAAAGCAAGGCCGCCCTGGAGTGCTTAGGGCAAGCTGAAGATT
47▶ S E E K A T M Y D L L A Y I K H L D G E S K A A L E C L G Q A E D

BstEII (843)
SalI (836)
801 TAAGGAAGTCAGAGCACAATGATCAATCAGAAATTCGTCGACTGGTCCCTGGGAAACTACGCTGGATCTACTATCACATGGGCCGCTCTCAGAAGC
80▶ L R K S E H N D Q S E I R R L V T W G N Y A W I Y Y H M G R L S E A

BstAPI (956)
901 TCAGGCTTACGTTGACAAGGTGAGACAAGTTTGCCAAAAGTTTGCGAATCCTTACAGCATGGAATGCCAGAACTTGAATGTGAGGAAGGATGGACACGC
113▶ Q A Y V D K V R Q V C Q K F A N P Y S M E C P E L E C E E G W T R

MscI (1088)
XbaI (1047) **EcoO109I (1064)** **BsaBI (1086)**
1001 CTAAGTGTGGAAGAAATGAACGAGCAAAAATGTGCTTTGAAAAGGCTCTAGAAGAGAAGCCAAAGGACCCAGAGTGCTCCTCTGGGATGGCCATCGCCA
147▶ L K C G R N E R A K M C F E K A L E E K P K D P E C S S G M A I A

NcoI (1157)
1101 TGTCCGCCTAGAAGAAAAACCTGAGAAGCAGTCTCCCGTGGATGCTCTGAAGCAGGCCATGGAGTTGAATCCTCAGAACCAGTACCTGAAAGTTCTCCT
180▶ M F R L E E K P E K Q F S V D A L K Q A M E L N P Q N Q Y L K V L L
1201 GGCCTGAAACTGCTGAGGATGGGAGAAGAAGCTGAAGGGGAGCGATTGATTAAGATGCTTTGGGAAAAGCTCCTAATCAAACGGATGCTCCTCAAAAAG
213▶ A L K L L R M G E E A E G E R L I K D A L G K A P N Q T D V L Q K

BstEII (1324)
1301 GCAGCTCAGTTTTACAAGAAAAAGGTAACCTAGACAGAGCTATTGAGTACTTGGAAAAGCACTGCGATCCACAGTGAACAACAGTCCCTCTCTACTCTT
247▶ A A Q F Y K K K G N L D R A I E L L G K A L R S T V N N S P L Y S
1401 TGGTCATGTGCCGTTACAGGAAATACTGGAGCAGCTACAGAATAAAGGAGATGCTGACAGCAGTGAGAGAAGACAGAGGATGCCAGAAGTACGAGCGATT
280▶ L V M C R Y R E I L E Q L Q N K G D A D S S E R R Q R M A E L R R L

ClaI (1567)
BglII (1560) **BsaBI (1599)**
1501 AACGATGGAGTTCATGCAGAAGACTCTTCAGAGGAGGCGAAGTCTTTGAACTCCTACTCAGATCTCATCGATTTCCCGGAAGTAGAGAGATGCTATCAG
313▶ T M E F M Q K T L Q R R R S P L N S Y S D L I D F P E V E R C Y Q

Eco47III (1649)
1601 ATGGTCATCAGTAAGGAGAGCCCCGATGTTGAGGAAGAAGACCTCTATGAGCGCTATTGCAACCTCCAGGAGTACCACAGGAAGTCTGAAGACCTCGCAG
347▶ M V I S K E S P D V E E E D L Y E R Y C N L Q E Y H R K S E D L A

BglII (1779)
1701 CCCTGGAGTGTGTTGTTGCAATTTCCAGAAATGAAAGGTCAATCGAGAAGGAAGAGGTTAAAGAGCAAACATGCAAGCAGATCTTAACTCCAGTAGCA
380▶ A L E C L L Q F P R N E R S I E K E E V K E Q T •

MscI (1806)
NheI (1800)
1801 GCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTA

HpaI (1938) **MfeI (1949)**
1901 TTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTT

EcoRI (2034)
2001 TTAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAATACAGCATAGCAAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCT
2101 GAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTATGAGTAAAGATATAGTGATTTTT

SspI (2273) **SwaI (2287)**
2201 CCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATAGTAAATATTCAGAATAATTTAAATACATC

EcoO109I (2348)
2301 ATTGCAATGAAAAATAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGA

2401 ACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTT
141 • N R T Y K L P I L E E I T T K V L K
SacI (2548) BstXI (2577)
2501 GCCATTCACTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACC
122 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 D V
2601 TCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGA
88 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 V T V
StuI (2712)
2701 CCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGTCTCATAGAGCAT
55 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 L M
2801 GGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTAT
22 T I K E T A V E V L E L D Q Q S I N F T K M
AseI (2920) SacI (2977)
2901 GCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCC
SacI (3075)
3001 CACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGA
CTAGTCAAAAACAACTCCCATTGA
3101 CGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGAC
SnaBI (3203)
3201 TAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGC
NdeI (3308)
3301 GTACTTGGCATATGATACTTGTACTGCTGCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTA
PacI (3494)
3401 TGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCGTCAGGTTAATT
PstI (3487)
SdaI (3486)
3501 AAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAGGCCGCTTGGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA
BspLU11I (3504)
3601 AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGAC
3701 CCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTCGTT
ApaLI (3818)
3801 CGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACAGACT
3901 TATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACAC
4001 TAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGC
4101 GGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGAACG
EagI (4254)
4201 AAAACTCACGTAAAGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAAATATCTTTATTTTCATTACATCTGTGTGTTGGT
PacI (4234) SmaI (4243) NotI (4253)
4301 TTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCA
4401 GAACATTTCTCTATCGAA