



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

Psp1406I (203) HindIII (245) **Bsu36I (291)**
 EcoNI (287)
 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCCTGCTGCCCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 NaeI (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) AgeI (552) NcoI (560) SspI (575)
 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCATGGAGGAAGGTCAATATTCAGAGATCGAGGAGCTTCC
 1▶ M E E G Q Y S E I E E L P

BsrBI (656)
 601 CAGGAGGCGGTGTTGAGCGCGGGGACTCAGATCGTGCTGCTGGGGCTGGTGACCGCGCTCTGTGGGCTGGGCTGCTGACTCTGCTTCTCTGTGGCAC
 13▶ R R R C C R R G T Q I V L L G L V T A A L W A G L L T L L L L W H

BstXI (764)
 701 TGGGACACCACAGAGTCTAAAACAGCTGGAAGAGAGGGCTGCCTGGAACGCTCTCAAGTTTCCAAGAAGTGGAAAGCCACCAGGTGACCAGATGG
 47▶ W D T T Q S L K Q L E E R A A W N V S Q V S K N L E S H H G D Q M

BsaBI (863)
 801 CGCAGAAATCCCAGTCCACGCAGATTTACAGGAACTGGAGAACTTCGAGCTGAACAGCAGAGATTGAAATTCAGGACTTGGAGCTGCTGGAACCT
 80▶ A Q K S Q S T Q I S Q E L E E L R A E Q Q R L K S Q D L E L S W N L

BglIII (915) HindIII (959)
 901 GAACGGGCTTCAAGCAGATCTGAGCAGCTTCAAGTCCCAGGAATTGAACGAGAGGAACGAAGCTTCAGATTTGCTGGAAAGACTCCGGGAGGAGGTGACA
 113▶ N G L Q A D L S S F K S Q E L N E R N E A S D L L E R L R E E V T

BbrPI (1044)
 1001 AAGCTAAGGATGGAGTTGCAGGTGTCAGCGGCTTTGTGTGCAACACGTGCCCTGAAAAGTGATCAATTTCCAACGGAAGTGTACTACTTCGGAAGG
 147▶ K L R M E L Q V S S G F V C N T C P E K W I N F Q R K C Y Y F G K

SphI (1197)
 1101 GCACCAAGCAGTGGGTCCACGCCGGTATGCCTGTGACGACATGGAAGGGCAGCTGGTCAAGTCCACAGCCCGAGGAGCAGGACTTCTGACCAAGCA
 180▶ G T K Q W V H A R Y A C D D M E G Q L V S I H S P E E Q D F L T K H
 1201 TGCCAGCCACACCGGCTCCTGGATTGGCTTCGGAACCTGGACCTGAAGGGGGAGTTTATCTGGGTGGATGGAGCCATGTGGACTACAGCAACTGGGCT
 213▶ A S H T G S W I G L R N L D L K G E F I W V D G S H V D Y S N W A

KasI (1393)
 1301 CCAGGGGAGCCACCAGCCGAGCCAGGGGAGGACTGCGTGATGATGCGGGGCTCCGGTTCGCTGGAACGACGCTTCTGCGACCGTAAGCTGGGCGCCT
 247▶ P G E P T S R S Q G E D C V M M R G S G R W N D A F C D R K L G A

MseI (1415) **SacII (1448)** EcoO109I (1461) EagI (1488)
 1401 GGGTGTGCGACCGGCTGGCCACATGCACGCCGAGCCAGCGAAGGTTCCGCGGAGTCCATGGGACCTGATTCAAGACCAGACCTGACGGCCGCTGCC
 280▶ W V C D R L A T C T P P A S E G S A E S M G P D S R P D P D G R L P

MscI (1557)
NheI (1551)
 1501 CACCCCTCTGCCCTCTCCACTTTGAGCATGGATACAGCCAGCCAGCCAGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCA
 313▶ T P S A P L H S •

HpaI (1689)
 1601 CAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACA

MfeI (1700) **EcoRI (1785)**
 1701 CAATTGCATTCAATTTATGTTTCAGGTTACAGGGGAGGTGTTGGAGGTTTTTAAAGCAAGTAAACCTTACAATGTGGTATGGAATCTAAATACA
 1801 GCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTTTGCCAATGTGCATTA
 1901 GCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACTCTTCTTTATTTGTTTAAATGCACTGA

SspI (2024) SwaI (2038) EcoO109I
 2001 CCTCCACATTCCCTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAA
 2101 GGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTT
 141 • N

SacI (2299)
 2201 CTTGGTGTACTTGAGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATG
 139▶ 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 D P A Y D S I

BstXI (2328)
 2301 AGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGCTGACAGCCACAATGGTGTCAAAGTCTTCT
 105▶ 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 I T D F D K Q

StuI (2463)
 2401 GCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGT
 72▶ 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 A S I I E G T

2501 CTTGGTCCTGATGGCCGCCCGACATGGTGTGTTGTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAG
394 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 L E L D Q Q S

BspHI (2613)
BbsI (2609)
XmnI (2605) AseI (2671)

2601 ATGTTGAAGGTCTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGT
5 I N F T K M

SacI (2728)

2701 CTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTCGTCATGGGGCGGAGTTGTTA

SpeI (2826)

2800 CGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTAT

SnaBI (2954)

2899 CCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCATGT

NdeI (3059)

2999 ACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTA

3099 CCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGC

PstI (3238) SdaI (3237) PacI (3245) BspLU11I (3255)

3199 GGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAA
3297 AAGGCCGCGTTGCTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTAT
3397 AAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAG

ApaLI (3569)

3497 CGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGAC
3597 CGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGA
3697 GGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTAC
3797 CTTGCAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACCAACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAA

PacI (3985) SmaI (3994)

3897 GGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACAT

EagI (4005)
NotI (4004)

3997 TTAAATCAGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAA
4097 ACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA