



PvuI (7)
SgfI (6)
EcoNI (96)

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

HindIII (245)
EcoNI (287)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BspHI (560)

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCATCATGAACCCACGGATATAGCAGACACCACCCTCGATGA
 601 AAGCATATACAGCAATTACTACTGTATGAAAGTATCCCAAGCCTGCACCAAGAAGGCATCAAGGCATTTGGGGAGCTTCTCTGCCCCACTGTAT
 13▶ S I Y S N Y Y L Y E S I P K P C T K E G I K A F G E L F L P P L Y
 701 TCCTTGGTTTTGTATTTGGTCTGCTTGGAAATCTGTGGTGTCTGGTCTGTTCAAATACAAGCGGCTCAGGTCCATGACTGATGPTACCTGCTCA
 47▶ S L V F V F G L L G N S V V V L V L F K Y K R L R S M T D V Y L L

XcmI (864)

801 ACCTTGCCATCTCGGATCTGCTCTTCGTGTTTTCCCTCCCTTTTTGGGGCTACTATGCAGCAGACCAGTGGGTTTTGGGCTAGGTCTGTGCAAGATGAT
 80▶ N L A I S D L L F V F S L P F W G Y Y A A D Q W V F G L G L C K M I

DraIII (982)

901 TTCCTGGATGTACTTGGTGGGCTTTTACAGTGGCATATCTTTGTGTCATGCTCATGAGCATTGATAGATACCTGGCAATTGTGCACGCGGTGTTTTCTTG
 113▶ S W M Y L V G F Y S G I F F V M L M S I D R Y L A I V H A V F S L
 1001 AGGCAAGGACCTTGACTTATGGGGTCATCACCAGTTTGGCTACATGGTCAGTGGCTGTGTTCCGCTCCCTTCCCTGGTCTTCTGTTACGCACTTGTATA
 147▶ R A R T L T Y G V I T S L A T W S V A V F A S L P G F L F S T C Y

ScaI (1130)
DraIII (1146)

1101 CTGAGCGCAACCATACTACTGCAAAACCAAGTACTCTCAACTCCACGACGTGGAAGTTCTCAGCTCCCTGGAAATCAACATTCTCGGATTGGTGAT
 180▶ T E R N H T Y C K T K Y S L N S T T W K V L S S L E I N I L G L V I

Bsu36I (1202)

1201 CCCCTTAGGGATCATGCTGTTTTGCTACTCCATGATCATCAGGACCTTGACGATTGTAATAAATGAGAAGAAGACAAGCGGTTGAAGATGATCTTTGCC
 213▶ P L G I M L F C Y S M I I R T L Q H C K N E K K N K A V K M I F A

XmnI (1372)

1301 GTGGTGGTCTCTTCTTGGGTTCTGGACACCTTACAACATAGTCTCTTCTAGAGACCCTGGTGGAGCTAGAAGTCCCTCAGGACTGCACCTTTGAAA
 247▶ V V V L F L G F W T P Y N I V L F L E T L V E L E V L Q D C T F E

XcmI (1424)

1401 GATACTTGGACTATGCCATCCAGGCCACAGAACTCTGGCTTTTGTCTACTGCTGCCTAATCCCATCATCTACTTTTTCTGGGGGAGAAATTCGCAA
 280▶ R Y L D Y A I Q A T E T L A F V H C C L N P I I Y F F L G E K F R K

PstI (1524)
BstXI (1548)

1501 GTACATCTACAGCTCTTCAAACCTGCAGGGCCTTTTTGTGCTCTGCCAATACTGTGGGCTCCTCAAATTTACTCTGCTGACACCCCGCTCATCT
 313▶ Y I L Q L F K T C R G L F V L C Q Y C G L L Q I Y S A D T P S S S

BspHI [mj] (1620)

BsaBI (1618)

NcoI (1613)

1601 TACACGCAGTCCACCATGGATCATGATCTCCATGATGCTCTGTAGAAAAATGAAATGGTAAATGCAGAGTCAATGAACCTTCCACATTGAGAGCTTACT
 347▶ Y T Q S T M D H D L H D A L •

MscI (1747)

NheI (1741)

1701 TAAAATTGATTTTAGTAAGAGATTCTGAGCCAGTGTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAAT

HpaI (1879)

1801 GCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATT

EcoRI (1975)

1901 CATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAAACAGCATAGCAAA
 2001 ACTTTAACCTCCAAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCA
 2101 GCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAAGTTTGAAGTACTCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACAT

SspI (2214)
SwaI (2228)

2201 TCCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCAT
 2301 AATATCCCCAGTTTAGTGTGGACTTAGGGAACAAAGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTAC
 2401 TTAGGGGGATGAGTTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGC
 135▶ 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 L E R C

BstXI (2518)
 2501 ACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCT
 102 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 G N S

StuI (2653)
 2601 CACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGT
 69 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 K T R

BbsI (2799)
 XmnI (2795)
 2701 ATGGCCGCCCGACATGGTGCTTGTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGG
 35 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 I N F T

AseI (2861)
 2801 TCTTCATGGTGGCCCTCCTATAGTGAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTA
 2 K M

2901 TCTGACGGTTCACATAACAGACTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGG

SpeI (3016)
 3001 AAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTG

SnaBI (3144)
 3101 ATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTGATGACTGGGCATAAT

NdeI (3249)
 3201 GCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACTC
 3301 CACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGC

PstI (3428)
 SdaI (3427) PacI (3435) BspLU11I (3445)
 3401 GGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAATAAGAACATGTGAGCAAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGTTGCT
 3501 GGGGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCG
 3601 TTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTC

ApaLI (3759)
 3701 ATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTACGCCGACCGCTGCGCCTTATC
 3801 CGGTAACATATCGTCTTGAAGTCCAAACCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGT
 3901 GCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAG
 4001 TTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGA

EagI (4195)
 PacI (4175) SwaI (4184) NotI (4194)
 4101 TCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCTAGGCTAGTTAATTAACATTTAAATC AGCGGCC

4201 GCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAA
 4301 ACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA