



125

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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

KasI (535)
AgeI (552)
NcoI (560)
BstEII (555)

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACGGTCACCATGGAGAGTGAGTACCGGAAATGCTGTTGTTGACCGG
 1 M E S E Y R E M L L L T G

XmnI (627)
Scal (638)

601 CCTGGACCACATCACGGAGAAGAACTGAAACGGTTCAAGTACTTTGCTTTGACTGAGTTTCAGATTGCCAGGAGCACACTCGACGTCGAGATAGGACA
 13 L D H I T E E E L K R F K Y F A L T E F Q I A R S T L D V A D R T

PstI (740)
AseI (757)
SspI (760)
Ppu10I (784)
NsiI (784)

701 GAATTAGCTGACCACCTGATTCAAAGTGCAGGTGCGGCGTCTGCAGTGACCAAGGCCATTAATATTTCCAGAAGTTGAATTATATGCATATTGCAAATG
 47 E L A D H L I Q S A G A A S A V T K A I N I F Q K L N Y M H I A N

BspHI (836)

801 CTCTTGAAGAGAAAAAGAAAGAGCTGAACGTAACCTCATGACCAATACAAAGAGAGAGGAACACAGAAAGGTAGAAAATAGAAGTCAAGCTGAAAACCTG
 80 A L E E K K K E A E R K L M T N T K K R G T Q K V E N R S Q A E N C
 901 CTCTGCTGCTCTGCCACCCGAGTGACAATGACTTTAAGGAACAGGCTGCTACAGAAGTCTGTCTCAAGCTAAGCCTCAGAAGAAACAGATGGTGGCA
 113 S A A S A T R S D N D F K E Q A A T E V C P Q A K P Q K K Q M V A
 1001 GAACAGGAAGCCATCAGAGAAGATTTACAGAAAGATCCACTTGTGTACGGTGTGAAAGCTATAAAATCCCTTTGAGTGTGAGACTCAGGAAGGAAGAC
 147 E Q E A I R E D L Q K D P L V V T V L K A I N P F E C E T Q E G R

MscI (1121)

1101 AAGAGATATTTTCATGCAACAGTGGCCACCAGAGACAGATTTTTCTTTGTAAGTAAAAAGTAAAAACGCACAGTTAAAGATAAAATTTATCCCAAAGAGACAAT
 180 Q E I F H A T V A T E T D F F F V K V L N A Q F K D K F I P K R T I

BstEII (1239)
Psp1406I (1294)

1201 TAAAATATCAAACACCTTTGGCACAGTAACTCATGGAGGTCACCAGTTCCTCAGTTGTGGTTGATGTTGAATCTAACCACGAAGTCCCAAATAACGTT
 213 K I S N Y L W H S N F M E V T S S S V V V D V E S N H E V P N N V
 1301 GTTAAGAGAGCCAGGGAAACTCCAGGATTAGTAAACTGAAGATTCAGCCATGTGGAACAATTGTGAATGGGCTGTTTAAAGTCCAGAAGATAACAGAGG
 247 V K R A R E T P R I S K L K I Q P C G T I V N G L F K V Q K I T E

Scal (1410)
Bst1107I (1421)

1401 AAAAAATAGAGTACTATATGGTATACATGATAAAACAGGACAATGGAGGTGTTGGTGTGGGAAACCAAGCAAAACAAAGTGCAGGAGAGGAGACAA
 280 E K D R V L Y G I H D K T G T M E V L V L G N P S K T K C E E G D K
 1501 GATTAGACTCAGTCTTTGAGGTGTCAAAAAATGGAGTGAATTCAGTGAATCTGGACCTGTAGCTTTTTAAAGTATTAAAGCTGCAAAGCCA
 313 I R L T F F E V S K N G V K I Q L K S G P C S F F K V I K A A K P

MscI (1663)
NheI (1657)

1601 AAAACTGACATGAAAAGTGTGGAGTGAAGTCAACTCATTGAAAAACCTTTCTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGAC
 347 K T D M K S V E

HpaI (1795)

1701 AAACCACAAC TAGAATGCAGTGA AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAA

EcoRI (1891)

1801 CAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATCTAA
 1901 AATACAGCATAGCAAAC TTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGT
 2001 GCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATG

SspI (2130)
SwaI (2144)

2101 CACTGACCTCCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGCGAATCCAGAT

EcoO109I (2205)

2201 GCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTCTAGCT

SacI (2405)
BstXI (2434)

2301 TTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCA
 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 C D P A Y D
 2401 GAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGT
 107 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 I T D F D

StuI (2569)
Eco147I (2569)
 2501 CCTTCTGCCCGTTGCTCACAGCAGACCCAAATGGCAATGGCTTCAGCACAGACAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTC
 74 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 A S I I E
 2601 CCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGC
 41 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 L E L D Q
BspHI (2719)
XmnI (2711) **AseI (2777)**
 2701 TGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGGA
 74 Q S I N F T K M
SacI (2834)
 2801 TGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTCGCTCAATGGGGCGGAG
SpeI (2932)
 2900 TTGTTACGACATTTTGGAAAGTCCCCTGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAAC
SnaBI (3060)
Eco105I (3060)
 2999 CGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGG
NdeI (3165)
 3099 TCATGTACTGGGCATAATGCCAGGCGGGCCATTACCCTGATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGC
 3199 AGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGGTGC
PstI (3344)
SdaI (3343) **PacI (3351)** **BspLU11I (3361)**
 3299 TTGGGCGTCCAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G A A A A G G C C A G G A A C
 3397 CGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAG
 3497 GACTATAAAGATACCAGGCGTTTCCCCTGGAAGTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTC
ApaLI (3675)
 3597 GGGAAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAG
 3697 CCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCA
 3797 GAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCC
 3897 AGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGGCAAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGA
PacI (4091)
 3997 AAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTGGTCATGGCTAGTTAAT
EagI (4111)
NotI (4110)
SwaI (4100)
 4097 TAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAA
 4197 AACAAAACGAAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA