



NotI (-1)
1 GCGGCCCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACA
PvuI (172)
SgfI (171)
101 AAACAAACTAGCAAAATAGGCTGTCCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAAGGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGCA
AgeI (254)
201 GAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGTGGCAATTGAACCGTGCCTAGAGAAGGTGGCGGGGTAACAGTGGAAAGTATG
Psp1406I (368)
301 TCGTGTACTGGCTCCGCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCCGCGTGAACGTTCTTTTCGCAACGGGTTTGCCGCCAG
HindIII (410)
PvuII (404) Bsu36I (456)
401 AACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCCTTACGCGCCCGCCCTACCTGAGGCGCCATCCACGCCGTTGAGTCGCGTTCGCGCCCT
501 CCGCGCTGTGGTCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACCGGGCCTTTGTCCGGCGCTCCCTGGAGCCTACCTA
NaeI (606)
601 GACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTTTCTGTTCTGCGCGTTACAGATCCAAGCTGTGACC
KasI (700) AgeI (717) BspHI (733) NcoI (775)
701 GCGCCCTACCTGAGATCACCGTAGGAGGGCCATCATGTGCTGCGCTCGCGCTGGCTGGGACTCTGATCCAGCCATGGCCTTCCCTCTC
1 M M S A S R L A G T L I P A M A F L S
NsiI (851)
792 CTGCGTGAGACCCGAAAGCTGGGAGCCCTGCGTGGAGGTGGTTCCTAATATTACTTATCAATGGAGTGAATTTCTACAAAA
19 C V R P E S W E P C V E V V P N I T Y Q C M E L N F Y K
BstXI (901) Bsu36I (929)
878 TCCCGGACAACTCCCTTCTCAACCAAGAACCCTGGACCTGAGCTTTAATCCCTGAGGCATTTAGGCAGCTATAGCTTTCAGTTTCCAGAAC
48 I P D N L P F S T K N L D L S F N P L R H L G S Y S F F S F P E
974 TGCAGGTGCTGGATTTATCCAGGTGTGAAATCCAGACAATTGAAGTGGGGCATATCAGAGCCTAAGCCACTCTACCTTAATATTGACAGGAAACCC
80 L Q V L D L S R C E I Q T I E D G A Y Q S L S H L S T L I L T G N P
1074 CATCCAGAGTTTACCCCTGGAGCCTTTCTGGACTATCAAGTTTACAGAAGCTGGTGGCTGTGGAGACAATCTAGCATCTCTAGAGAACCTCCCCAT
113 I Q S L A L G A F S G L S S L Q K L V A V E T N L A S L E N F P I
ScaI (1267)
1174 GGACATCTCAAACCTTTGAAAGAACTTAATGTGGCTCACAATCTTATCCAATCTTTCAAATTACCTGAGTATTTTTCTAATCTGACCAATCTAGAGTACT
147 G H L K T L K E L N V A H N L I Q S F K L P E Y F S N L T N L E Y
1274 TGGACCTTCCAGCAACAAGATTCAAAGTATTTATGACAGACTTGGCGGTTCTACATCAAATGCCCTACTCAATCTCTTTAGACCTGTCCCTGAA
180 L D L S S N K I Q S I Y C T D L R V L H Q M P L L N L S L D L S L N
1374 CCCTATGAACCTTATCCAACAGGTGCATTTAAGAAATAGGCTTCATAAGCTGACTTTAAGAAATAATTTGATAGTTTAAATGTAATGAAACTTGT
213 P M N F I Q P G A F K E I R L H K L T L R N N F D S L N V M K T C
EcoO109I (1567)
1474 ATTCAGGTCTGGCTGGTTTGAAGTCCATCGTTTGGTCTGGGAGAATTTAGAAATGAAGGAACTTGGAAAAGTTGACAAATCTGCTCTAGAGGGCC
247 I Q G L A G L E V H R L V L G E F R N E G N L E K F D K S A L E G
1574 TGTGCAANTTACCATTGAAGAATCCGATTAGCATACTAGACTACTCTCGATGATATTGACTTATTTAATTGTTGACAAATGTTTCTTCCATT
280 L C N L T I E E F R L A Y L D Y Y L D G I I D L F N C L T N V S S F
HpaI (1746)
1674 TTCCCTGGTGTGACTATTGAAAGGGTAAAAGACTTTTCTTATAATTCGGATGGCAACATTTAGAATTAGTAAATTTGACAGTTTCCC
313 S L V S V T I E R V K D F S Y N F G W Q H L E L V N C K F G Q F P
BglII (1868)
1774 ACATTGAACTCAAATCTCTCAAAGGCTTACTTTCACTTCCAACAAAGTGGGAATGCTTTTTCAGAAGTTGATCTACCAAGCCTTGGATTTCTAGATC
347 T L K L K S L K R L T F T S N K G G N A F S E V D L P S L E F L D
BglII (1946)
1874 TCAGTAGAAATGGCTTGAAGTTTCAAAGTGTCTTCAAAAGTATTTGGGACAACAGCCTAAAGTATTTAGATCTGAGCTTCAATGGTGTATTAC
380 L S R N G L S F K G C C S Q S D F G T T S L K Y L D L S F N G V I T
1974 CATGAGTTCAAATCTTGGGCTTGAACAACAGTGAACATCTGGATTTCCAGCATTCCAATTTGAAACAAATGAGTGAGTTTTCAGTATTCTATCACTC
413 M S S N F L G L E Q L E H L D F Q H S N L K Q M S E F S V F L S L
2074 AGAAACCTATTACCTTGCATTTCTCATACTCACACAGTGTCTTCAATGGCATCTTCAATGGCTTGTCCAGTCTGCAAGTCTTGAAGTGGCTG
447 R N L I Y L D I S H T H T R V A F N G I F N G L S S L E V L K M A
EcoRV (2202)
2174 GCAATCTTTCCAGGAAAACCTTCCCTCCAGATATCTCCAGAGCTGAGAAACTTGACCTTCTGACCTCTCTCAGTGTCACTGGAGCAGTTGTCTCC
480 G N S F Q E N F L P D I F T E L R N L T F L D L S Q C Q L E Q L S P
2274 AACAGCATTTAACTCACTCTCCAGTCTTCCAGTACTAAATATGAGCCACAACAACCTTCTTTTCAATGGATACGTTTCCCTTATAAGTGTCTGAACTCCCTC
513 T A F N S L S S L Q V L N M S H N N F F S L D T F P Y K C L N S L
2374 CAGGTTCTTGTATACAGTCTCAATCACATAAGTACTTCCAAAACAGGAACTACAGCATTTTCCAAAGTGTCTAGCTTTCTTAACTTACTCAGAATG
547 Q V L D Y S L N H I M T S K K Q E L Q H F P S S L A F L N L T Q N
2474 ACTTTGCTTACTTGTGAACACAGAGTTTCTGCAATGGATCAAGGACCAGAGGCGACTTGTGGTGAAGTTGAACGAATGGAATGTGCGACACCTTC
580 D F A C T C E H Q S F L Q W I K D Q R Q L L V E V E R M E C A T P S
SphI (2584)
2574 AGATAAGCAGGGCATGCCTGTGCTGAGTTTGAATATCACCTGTGAGTGAATAAGACCATCATTGGTGTGTCGGTCTCAGTGTGCTGTAGTATCTGTT
613 D K Q G M P V L S L N I T C Q M N K T I I G V S V L S V L V V S V
2674 GTAGCAGTTCTGGTCTATAAGTTCTATTTTACCTGATGCTTCTGCTGGCTGCATAAAGTATGGTAGAGGTGAAAACATCTATGATGCCTTTGTTATCT
647 V A V L V Y K F F H L M L L A G C I K Y G R G E N I Y D A F V I
2774 ACTCAAGCAGGATGAGGACTGGTAAGGAATGAGCTAGTAAAGAATTTAGAAGAAGGGTGCCTCCATTCAGCTCTGCCTTCACTACAGAGACTTTAT
680 Y S S Q D E D W V R N E L V K N L E E G V P P F Q L C L H Y R D F I
Ball (2881)
2874 TCCCGTGTGGCATTGCTGCCAATCATCCATGAAGTTTCCATAAAAAGCCGAAAGGTGATTGTTGTTGGTGTCCAGCACTTCCATCCAGAGCCGCTGG
713 P G V A I A A N I I H E G F H K S R K V I V V V S Q H F I Q S R W
2974 TGTATCTTTGAATATGAGATTGCTCAGACTGGCAGTTTCTGAGCAGTGTGCTGTTATCATCTTCAATGCTGCGAGAAGGTGGAGAAGACCTGCTCA
747 C I F E Y E I A Q T W Q F L S S R A G I I F I V L Q K V E K T L L
3074 GGCAGCAGTGGAGCTGTACCGCTTCTCAGCAGGAACACTTACCTGGGGTGGGAGGACAGTGTCTGCGGGCGCACATCTCTGGAGACGACTCAGAAA
780 R Q Q V E L Y R L L S R N T Y L G W E D S V L G R H I F W R R L R K
Ball (3261)
NheI (3255)
3174 AGCCCTGCTGGATGGTAAATCATGGAATCCAGAAGGAACAGTGGGTACAGGATGCAATTTGGCAGGAAGCAACATCTATCTGAGTACTGGCCAGACATG
813 A L L D G K S W A N P E G T V G T G C N W Q E A T S I
3274 ATAAGATACATTGATGAGTTTGGACAAACCAACTAGAATCAAGTGAAGAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTTGTAAACCA

3374 ^{HpaI (3393)} TTATAAGCTGCAATAAACAGTTAAACAAACAATTGCATTCAATTTATGTTTCAGGTTACGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAACCT
 3474 CTACAAATGTGGTATGGAATTC³⁴²AAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCAT
 3574 AGGCATCAGGGCTGTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTGAAGTACG

3674 ^{SwaI (3742)} TCTTCATTTCTTTATGTTTAAATGCACCTGCCACATTCCCTTTTATAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAA

3774 ^{EcoO109I (3803)} GTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGGACTTAGGGAAACAAAGAACCTTTAATAGAAATTGG

3874 ^{ScaI (3960)} ACAGCAAGAAAGCGAGCTTCTAGCGAATTCTCGACTCATTCCCTTGGCCCTCGGACGAGTGTGGGGCGTCGGTTCCACTATCGGGGAGTACTTCTACAC
 3974 AGCCATCGGTCCAGACGGCCCGCTTCTCGGGCGATTTGTGACGCCGACAGTCCCGGCTCCGGATCGGACGATTGCGTCCGATCGCCCTCGCCCA
 320 G D T W V A A S R R A I Q T R G V T G A G S R V I A D C R G Q A W
^{SacII (4151)}
 4074 AGCTGCATCATCGAAATGCCGTCAACCAAGCTCTGATAGAGTTGGTCAAGACCAATGCGGAGCATATACGCCCGGAGCCGGCGATCTCGCAAGCTCC
 287 A A D D F N G D V L S Q Y L Q D L G I R L M Y A R L R P S G A L E
^{BsrBI (4181)}
 4174 GGATGCCCTCGCTCGAAGTAGCGGCTGTCTGCTCCATACAAGCCAACCGCCCTCCAGAAGAAGATGTTGGCGACCTCGTATTGGGAATCCCCGAACA
 253 P H R R E F Y R T Q Q E M C A L W P R W F F I N A V E Y Q S D G F M
^{DraIII (4349)}
 4274 TCGCCTCGCTCCAGTCAATGACCGCTGTTATCGGGCATTGTCCGTCAGGACATTGTTGGAGCCGAAATCCGCGTGCACGAGGTGCCGGACTTCGGGGCA
 220 A E S W D I V A T I R G N D T L V N N S G F D A H V L H R V E P C
 4374 GTCCTCGGCCAAAGCATCAGCTCATCGAGAGCTCGCGACGGACGCACTGACGGTGTCTCCATCACAGTTTCCAGTGATACACATGGGATCAGCA
 187 D E A W L M L E D L A Q A V S A S V T D D M V T Q W H Y V H P D A
^{PvuI (4567)}
 4474 ^{NdeI (4479)} ATCGCGCATATGAAATCACGCCATGTAGTGTATTGACCGATTCCCTTGGGTCGGAATGGGCCGAACCCGCTCGTCTGGCTAAGATCGGCCGACGCGATCG
 153 I A C I F D R W T T Y Q G I G Q P G F P G F G S T Q S L D A A A I A
^{SgfI (4566)}
^{SacI (4580)} 4574 CATCCATGAGCTCCGCGACGGGTTGCAAGAACAGCGGCAGTTCGGTTTACGGCAGGCTTTGCAACGTGACACCTGTGCACGGCGGGAGATGCAATAGGT
 120 D M L E A V P Q L V A P L E T E P L D Q L T V G Q A R R S I C Y T
^{DraIII (4642)} 4674 CAGGCTCTCGCTGAATCCCAATGTCAAGCACTCCGGAATCGGGAGCGCGCCGATGCAAAGTGCCGATAAACATAACGATCTTTGTAGAAACCATCG
 87 L S E S F E G I D L V E P I P L A A S A F H R Y V Y R D K Y F G D
 4774 GCGCAGCTATTACCCGCGAGGACATATCCACGCCCTCTACATCGAAGCTGAAAGCACGAGATTTCTCGCCCTCCGAGAGCTGCATCAGGTCCGGAGACG
 53 A C S N V R L V Y G R G V D F S F A R S E E G E S L Q M L D S V S
^{PshAI (4901)}
^{NruI (4897)} 4874 TGTGCAACTTTTTCATGAGCAAACTTCGCGACAGACGTCGCGGTGAGTTCAGGCTTTTTCATGATGGCCCTCTATAGTGTGCTATTATACTATGCCGA
 20 D F K E I L F K A V S T A T L E P K K M
^{BspHI (4930)}
^{AseI (4988)} 4974 TATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAACGAGCTCTGCTTATATAGACCTCCACCCG
 5074 TACACGCCTACCGCCCATTTGCGTCAATGGGGCGGAGTGTGTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAACTCCCATGACGTCA
^{SpeI (5143)}
^{SnaBI (5271)} 5174 ATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCAGCCCATGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATA
 5274 CGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCAATGACTGAGGCAATAATGCCAGCGGGCCATTTACCGTCAATGACGTCAATAGGGGGCGTACT

5374 ^{NdeI (5376)} TGGCATATGATACACTTGTACTGCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGA

5474 ^{PacI (5562)} ACATACGTCATTATTGACGTCAATGGGGGGGTCGTTGGGCGGTGACGACGGCGCCATTTACCGTAAAGTATGTAACGCCCTGCAGGTTAATTAAGAA
^{SdaI (5554)} 5574 CATGTGAGCAAAAAGCCAGCAAAAGCCGAGAACCGTAAAAAGCCGCGTGTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAAT
^{BspLU11I (5572)} 5674 CGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCGTGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCCTGC
 5774 CGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGCTCACGCTGATGGTATCTCAGTTCGGTGTAGGTGTTCCGCTC
 5874 CAAGCTGGGCTGTGTGCACGAACCCCGTTACGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGTAGTCCAAACCGGTAAGACACGACTTATCG
 5974 CCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAA
 6074 GAACAGTATTTGGTATCTGCGCTCTGTGAAGCCAGTTACCTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAACAAACCCGCTGGTAGCGGTTG
 6174 TTTTTTTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGAACGAAAAAC

6274 ^{PacI (6302)} ^{SwaI (6311)} TCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCA