



125

PstI (6)
SdaI (6)

1 CCTGCAGGGCCCACTAGTCTCCCAGGCATGACTCCAACAATGCATCCCATGGGATTTGGGGTTCCCAGATCTGGGGCTTGTAGGCCTGACTCTCCCTG
101 TGACACGTCTCATAACGCATGCGTGCACCCATTGCCTGCCCGCCCTTGACAGGGAGTGCAGAGGGAGGACTGGGTTATGCCCTGCTTATCAGCAG
201 CTTCCAGCTTCTCTGCCTGGATTCTTAGAGGCTGGGGTCTAGAACGAGCTGGTGCACGTGGTTCCAAAGATCTCTCAGATAATGAGAGGAAATG
301 CAGTCATCAGTTTGCAGAAGGCTAGGGATTCTGGGCCATAGCTCAGACCTGCGCCACCATCTCCCTCCAGGCAGCCCTTGGCTGGTCCCTGCGAGCCCG

BspHI (414)

401 TGGAGACTGCCAGTCATGAGCGGTTCTCATCATCATCATCATGGTATGGCTAGCATGACTGGTGGACAGCAAATGGGTCGGGATCTGTACGACGATG
1 M S G S H H H H H H G M A S M T G G Q Q M G R D L Y D D
501 ACGATAAGGTACCTAAGGATCAGCTTGGAGTTGATCCCGTCTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACCTTAATCGCCTTGCAGC
29 D D K V P K D Q L G V D P V V L Q R R D W E N P G V T Q L N R L A A
601 ACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATGCCCTTCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTTCCTGG
62 H P P F A S W R N S E E A R T D R P S Q Q L R S L N G E W R F A W
701 TTTCCGGCACCAGAAGCGGTGCCGAAAGCTGGCTGGAGTGCATCTTCTGAGGCCGATACTGTCGTGCTCCCTCAAACCTGGCAGATGCACGGTTACG
96 F P A P E A V C P E S W L E C D L P E A D T V V V P S N W Q M H G Y
801 ATGCGCCCATCTACCAACGTCACCTATCCATTACGGTCAATCCGCGTTTGTTCACCGGAGAATCCGACGGTGTACTCGCTCACATTTAATGT
129 D A P I Y T N V T Y P I T V N P P F V P T E N P T G C Y S L T F N V
901 TGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATATTTTTGATGGCGTAACTCGGCGTTTCTGTGGTGAACGGGCGTGGGTTCGGTTACGGC
162 D E S W L Q E G Q T R I I F D G V N S A F H L W C N G R W V G Y G
1001 CAGGACAGTCTGTTGCCGTCTGAATTTGACCTGAGCGCATTTTTACGCGCCGAGAAAACCGCTCGCGGTGATGGTCTGCTTGGAGTGACGGCAGTT
196 Q D S R L P S E F D L S A F L R A G E N R L A V M V L R W S D G S
1101 ATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCGGTGACGTCTCGTTGCTGCATAAACCGACTACACAAATCAGCGATTTCCATGTTGCCAC
229 Y L E D Q D M W R M S G I F R D V S L L H K P T T Q I S D F H V A T
1201 TCGCTTAAATGATGATTTACGCCGCGTGAAGTTCAGATGTGCGGCGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAG
262 R F N D D F S R A V L E A E V Q M C G E L R D Y L R V T V S L W Q
1301 GGTGAAACGCAGTCCGACGGCACCAGCGCTTTCGGCGGTGAAATATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACTACGTCTGAACGTCG
296 G E T Q V A S G T A P F G G E I I D E R G G Y A D R V T L R L N V
1401 AAAACCCGAAACTGTGGAGCGCCGAAATCCCGAATCTCTATCGTGGGTGGTTGAACTGCACACCGCCGACGGCAGCGTATTGAAGCAGAAGCCTGCGA
329 E N P K L W S A E I P N L Y R A V V E L H T A D G T L I E A E A C D
1501 TGTCGGTTTCCGCGAGGTGCGGATGAAATGGTCTGCTGCTGAACGGCAAGCCGTTGCTGATTGAGGGCTTAACCGTCAAGCATCATCCTCTG
362 V G F R E V R I E N G L L L L N G K P L L I R G V N R H E H F L
1601 CATGGTCAGGTCATGGATGAGCAGCAGTGGTGCAGGATATCTGCTGATGAAGCAGAACAACCTTAAACGCGTGGCGTGTTCGATTATCCGAACCATC
396 H G Q V M D E Q T M V Q D I L L M K Q N N F N A V R C S H Y P N H
1701 CGTGTGGTACACGCTGTGCGACCGCTACGGCCTGTATGGTGGATGAAGCAATATTGAAACCCACGGCATGGTCCAATGAATCGTCTGACCGATGA
429 P L W Y T L C D R Y G L Y V V D E A N I E T H G M V P M N R L T D D
1801 TCCGCGTGGCTACCGCGATGAGCGAAGCGTAACCGCAATGGTGCAGCGCATCGTAATCACCCGAGTGTGATCATCTGGTGGTGGGAAATGAATCA
462 P R W L P C P A M S E R V T R M V Q R D R N H P S V I I W S L G N E S
1901 GGCCAGGCGCTAATCAGCAGCGCTGTATCGTCTGCTGATCCTTCCGCGCGTGCAGTATGAAGCGCGGAGCCGACACCACGGCCA
496 G H G A N H D A L Y R W I K S V D P S R P V Q Y E G G G A D T T A
2001 CCGATATTATTTGCCGATGTACGCGCGTGGATGAAGACCAGCCCTTCCGCGTGTGCCGAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGA
529 T D I I C P M Y A R V D E D Q P F P A V P K W S I K K W L S L P G E
2101 GACGCGCCGCTGATCCTTTGCAATACGCCACGCGATGGTAAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCGTTTA
562 T R P L I L C E Y A H A M G N S L G G F A K Y W Q A F R Q Y P R L
2201 CAGGGCGGCTTCTGCTGGGACTGGTGGATCAGTCTGATTAATATGATGAAAACGGCAACCCGTTGGTGGCTTACGGCGGTATTTTGGCGATACGC
596 Q G G F V W D W V D Q S L I K Y D E N G N P W S A Y G G D F G D T
2301 CGAACGATCGCCAGTCTGTATGAACGGTCTGGTCTTTGCCGACCGCAGCCGATCCAGCGTGCAGGAAAGCAAAACACCGCAGCAGTTCCTTCCGAT
629 P N D R Q F C T M N G L V F A D R T P H P A L T E A K H Q Q Q F F Q F
2401 CCGTTTATCCGGGCAACCATCGAAGTGACCAGCGAATACCTGTTCCGTCATAGCGATAACGAGCTCTGCACTGGATGGTGGCGCTGGATGGTAAGCCG
662 R L S G Q T I E V T S E Y L F R H S D N E L L H W M V A L D G K P
2501 CTGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGGAGAGCGCCGGGCAACTCTGGC
696 L A S G E V P L D V A P Q G K Q L I E L P E L P Q P E S A G Q L W
2601 TCACAGTACCGGTAGTGAACCGACCGCAGCCGATGGTGCAGAGCGGGCACATCAGCGCTGGCAGCAGTGGCGTCTGGCGGAAAACCTCAGTGTGAC
729 L T V R V V Q P N A T A W S E A G H I S A W Q Q W R L A E N L S V T
2701 GCTCCCCGCGCTCCACGCATCCCGCATCTGACCACCGAAGTGGATTTTGCATCGAGCTGGGTAATAAGCGTTGGCAATTAACCGCAGTCA
762 L P A A S H A I P H L T T S E M D F C I E L G N K R W Q F N R Q S
2801 GGCTTTCTTTCACAGATGTGGATTGGCGATAAAAAACAACTGCTGACCGCGTGCAGGATCAGTTACCCGTCACCGCTGGATAACGACATTGGCGTAA
796 G F L S Q M W I G D K K Q L L T P L R D Q F T R A P L D N D I G V
2901 GTGAAGCGACCCGATTGACCCTAACGCTGGTGAACGCTGGAAGCGCGGGCCATTACCAGGCCGAAAGCAGCGTTGTTGCAGTGCACGGCAGATAC
829 S E A T R I D P N A W V E R W K A A G A G H Y Q A E A A L L Q C T A D T
3001 ACTTGTAGTCGGTGTGATTACGACCGCTACCGCTGGCAGCATCAGGGAAAACCTTATTTATCAGCCGAAAACCTACCGGATTGATGGTAGTGGT
862 L A D A V L I T T A H A W Q H Q G K T L F I S R K T Y I D G S G
3101 CAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCGATACCCGATCCGCGCGGATTGGCTGAACTGCCAGCTGGCGCAGGTAGCAGAGCGGGTAA
896 Q M A I T V D V E V A S D T P H P A R I G L N C Q L A Q V A E R V

Q M A I T V D V E V A S D T P H P A R I G L N C Q L A Q V A E R V
3201 ACTGGCTCGGATTAGGGCCGAAGAAAACATCCCGACCGCTTACTGCCGCTGTTTTGACCCTGGGATCTGCCATTGTCAGACATGTATACCCCGTA
929▶ N W L G L G P Q E N Y P D R L T A A C F D R W D L P L S D M Y T P Y
3301 CGTCTTCCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGCAATTGAATTATGGCCACACCAAGTGGCGCGGCGACTTCCAGTTCAACATCAGCCGCTAC
962▶ V F P S E N G L R C G T R E L N Y G P H Q W R G D F Q F N I S R Y
3401 AGTCAACAGCAACTGATGAAAACAGCCATCGCCATCTGCTGCACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTCCATATGGGGATTGGTGGCG
996▶ S Q Q Q L M E T S H R H L L H A E E G T W L N I D G F H M G I G G

EcoRI (3599)

3501 ACGACTCTGGAGCCCGTCAAGTATCGGCGGAATTACAGCTGAGCGCCGGTCTGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATCTAGTCGAGA
1029▶ D D S W S P S V S A E L Q L S A G R Y H Y Q L V W C Q K •

3601 ATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTA
3701 TTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTT

3801 CAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTAGATCCATTTAAATGTTAATTAAGTCCATGACCAAAAT

3901 CCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCGCGTAATCTGCTGCTTG

4001 CAAACAAAAAACACCAGCTACCAGCGGTGGTTTTGTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATAC

4101 CAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTCAAGAAGTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGC

4201 TGCTGCCAGTGGCGATAAGTCGTGCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGGTTCGTGCACA

4301 CAGCCCAGCTTGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGAGAAAGGCGGACAGGT

4401 ATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTG

4501 ACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGAAAAACGCCAGCAACGCGCCTTTTTACGGTTCCTGGCCTTTTGTGGCCT

AseI (4646)

4601 TTTGCTCACATGTTCTTAATTAATTTTTCAAAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGC

4701 CATCATGGCCAAGTTGACCAGTGTGCCAGTGTCCAGTGTCCACAGCCAGGGATGTGGCTGGAGCTGTTGAGTTCTGGACTGACAGGTTGGGTTCTCCAGAGAT

4801 TTTGTGGAGGATGACTTTGCAGGTGTGGTCAGAGATGATGTACCCTGTTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACACCCTGGCTTGGG

4901 TGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGGTGGTCTCCACCACTTCCAGGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGA

5001 GCAGCCCTGGGGGAGAGAGTTTGCCTGAGAGACCCAGCAGGCAACTGTGTGCACTTTGTGGCAGAGGAGCAGGACTGAGGATAAGAATTGAGTTTCAGA

5101 AAAGGGGGCCTGAGTGGCCCTTTTTCAACTTAATTA