



SdaI (6)

1 CCTGCAGGGCCGCCACTCCCCCTTCTCTCAGGGTCCCTGTCCCTCCAGTGAATCCCAGAAGACTCTGGAGAGTTCTGAGCAGGGGGCGGCACTCTGG
101 CCTCTGATTGGTCCAAGGAAGGCTGGGGGGCAGGACGGGAGGCGAAAAACCTGGAATATTCCCGACCTGGCAGCCTCATCGAGCTCGGTGATTGGCTCAG
201 AAGGGAAAAGGGGGTCTCCGTGACGACTTATAAAAGCCAGGGGCAAGCGGTCCGGATAACGGCTAGCCTGAGGAGCTGCTGCGACAGTCCACTACCTT
301 TTTGAGAGTGACTCCCGTTGTCCCAAGGTTCCAGAGCGAACCTGTGCGGCTGCAGGCACCGGCGCTGAGTTCGGCGTCCGGAAGGACCGAGCT

NeoI (471)

401 CTTCTCGGGATCCAGTGTTCGGTTCCAGCCCCAATCTCAGAGCGGAGCCGACAGAGAGCAGGGAACCCCATGGGGGTTCTCATCATCATCATC
501 ATGGTATGGCTAGCATGACTGGTGGACAGCAAATGGGTCGGGATCTGTACGACGATGACGATAAGGTACCTAAGGATCAGCTTGGAGTTGATCCCCTCGT
101 H G M A S M T G G Q Q M G R D L Y D D D D K V P K D Q L G V D P V V
601 TTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACCTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGC
43 L Q R R D W E N P G V T Q L N R L A A H P P F A S W R N S E E A R
701 ACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCAATGGCGCTTTCCTGGTTCCGGCACCAGAAGCGGTGCCGAAAGCTGGCTGGAGTGGC
77 T D R P S Q Q L R S L N G E W R F A W F P A P E A V P E S W L E C
801 ATCTTCTGAGGCCGATACTGTCGTGCTCCCTCAAACCTGGCAGATGCACGGTTACGATGCGCCCATCTACACCAACGTAACCTATCCCATTACGGTCAA
110 D L P E A D T V V V P S N W Q M H G Y D A P I Y T N V T Y P I T V N
901 TCCGCCGTTTGTCCACGGAGAATCCGACGGGTTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACCGGAATATTTTT
143 P P F V P T E N P T G C Y S L T F N V D E S W L Q E G Q T R I F
1001 GATGGCGTTAACTCGCGTTTTCATCTGTGGTGAACGGCGCTGGGTCTGTTACGGCCAGGACAGTCTGTTGCCGTGAAATTTGACCTGAGCGCATTTT
177 D G V N S A F H L W C N G R W V G Y G Q D S R L P S E F D L S A F
1101 TACCGCCCGGAGAAAACCGCTCGCGGTGATGGTGTGCGTTGGAGTGACGGCAGTTATCTGGAAGATCAGGATATGTTGGCGGATGAGCGGCATTTTCCG
210 L R A G E N R L A V M V L R W S D G S Y L E D Q D M W R M S G I F R
1201 TGACGTCCTGTTGCTGCATAAACCGACTACACAACTCAGCGATTTCATGTTGCCACTCGCTTAAATGATGATTTACAGCCGCGTGTACTGGAGGCTGAA
243 D V S L L H K P T T Q I S D F H V A T R F N D D F S R A V L E A E
1301 GTTCAGATGTGCGGCGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTAAACGCAGGTCCGACGCGCACCGCGCTTTCGGCGGTG
277 V Q M C G E L R D Y L R V T V S L W Q G E T Q V A S G T A P F G G
1401 AAATTATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACACTACGTCGAAACGTCGAAAACCCGAAACTGTGGAGCGCCGAAATCCCGAATCTCTATCG
310 E I I D E R G G Y A D R V T L R L N V E N P K L W S A E I P N L Y R
1501 TGCGGTGGTTGAACTGCACACCGCCGACGCGCAGCTGATTGAAGCAGAAGCTGCGATGTCGGTTTCCGCGAGGTGCGGATGAAATGGTCTGCTGCTG
343 A V V E L H T A D G T L I E A E A C D V G F R E V R I E N G L L L L
1601 CTGAACGGCAAGCGTTGCTGATTCGAGGGGTTAACCGTCACGAGCATCATCTCTCGATGGTCAGGTCATGGATGAGCAGACGATGGTGCAGGATATCC
377 L N G K P L L I R G V N R H E H H P L H G Q V M D E Q T M V Q D I
1701 TGCTGATGAAGCAGAACAACCTTAAACCGCTGCGCTGTTCCGATTTCCGAACCTCCGCTGTGGTACACGCTGTCGACCGCTACGGCCTGATGTGGT
410 L L M K Q N N F N A V R C S H Y P R L Q G F V W D Y T L C D R Y G L V V
1801 GGATGAAGCAATATTGAAACCCACGGCATGGTCCAATGAATCGTCTGACCGATGATCCGCGTGGCTACCGCGGATGAGCGAACCGTAACCGGAATG
443 D E A N I E T H G M V P M N R L T D D P R W L P A M S E R V T R M
1901 GTGACGCGCATCGTAATCACCCGAGTGTGATCATCTGGTCTGGGGAATGAATCAGGCCACGGCGTAATCACGACGCGCTGATCGCTGGATCAAT
477 V Q R D R N H P S V I I W S L G N E S G H G A N H D A L Y R W I K
2001 CTGTCGATCTCCCGCCGGTGCAGTATGAAGCGGGGAGCCGACACCCAGCTGATATTATTGCCCAGTACGCGCGGTGGATGAAGACCA
510 S V D P S R P V Q Y E G G G A D T T A T D I I C P M Y A R V D E D Q
2101 GCCCTTCCCGCTGTGCCGAAATGGTCCATCAAAAATGGCTTTCGCTACCTGGAGAGACCGCCCGCTGATCCTTTGCGAATACGCCACCGCATGGGT
543 P F P A V P K W S I K K W L S L P G E T R P L I L C E Y A H A M G
2201 AACAGCTTGGCGGTTTCGCTAAACTGGCAGGCGTTTCGTCAGTATCCCCGTTTACAGGGCGGCTTCTGCTGGACTGGTGGATCAGTCTGATTA
577 N S L G G F A K Y W Q A F R Q Y P R L Q G F V W D Y T L C D R Y G L V V
2301 AATATGATGAAAACGGCAACCCGTTGGTGGCTTACGGCGGTGATTTTGGCGATACCGGAACGATCGCCAGTTCTGTATGAACGGTCTGGTCTTTGCCGA
610 K Y D E N G N P W S A Y G G D F G D T P N D R Q F C M N G L V F A D
2401 CCGCAGCCGATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTCCAGTTCGGTTTATCCGGGCAAAACCTGAAAGTACCGAGCGAATCCTG
643 R T P H P A L T E A K H G Q Q G T F F Q F R L S G Q T I E V T S E Y L
2501 TTCCGTCATAGCGATAACAGACTCTGCTGACTGGATGTTGGCGCTGGTGAAGCGCTGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTA
677 F R H S D N E L L H W M V A L D G K P L A S G E V P L D V A P Q G
2601 AACAGTTGATTGAACTGCCTGAACTACCGCAGCCGAGAGCGCCGGCAACTCTGGCTCACAGTACGCGTAGTGCAACCGAAGCGACCGCATGGTCA
710 K Q L I E L P E L P Q P E S A G Q L W L T V R V V Q P N A T A W S E
2701 AGCCGGGCACATCAGCGCTGCGCAGTGGCTGCGGAAAACCTCAGTGTGACGCTCCCGCGCTCCACCGCATCCCGCATCTGACCACCGC
743 A G H I S A W Q L A F W R L A E N L S V T P L P A A S H A I P H L T T S
2801 GAAATGGATTTTTCATCGAGCTGGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAAGCTTTTTCACAGATGTGGATTGGCGATAAAAAACAACCTG
777 E M D F C I E L G N K R W Q F N R Q S G F L S Q M W I G D K K Q L
2901 TGACGCCGCTGCGGATCAGTTACCCGTCACCGCTGGATAACGACATTGGCGTAAGTGAAGCGACCCGATTGACCTAACCGCTGGTCAAGCGCTG
810 L T P L R D Q F T R A P L D N D I G V S E A T R I D P N A W V E R W
3001 GAAGGCGCGGGCCATTACAGGCCGAAGCAGCGTTGTTGCACTGACCGGAGATACACTTGTGATGCGGTGCTGATTACGACCGCTACGCGTGGCAG
843 K A A G H Y Q A E A A L L Q C T A D T L A D A V L I T T A H A W Q
3101 CATCAGGGGAAAACCTTATTATCAGCCGAAAACCTACCGGATTGATGGTGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCGATACAC
877 H Q G K T L F I S R K T Y R I D G S G Q M A I T V D V E V A S D T
3201 CGCATCCGCGCGGATTGGCTGAACTGCCAGTGGCGCAGGTGACAGAGCGGGTAACTGGCTGGATTAGGGCCGCAAGAAAACATCCCGACCGCT
910 P H P A R I G L N C Q L A Q V A E R V N W L G L G P Q E N Y P D R L
3301 TACTGCCGCTGTTTACCCTGGGATCTGCCATTGTGACAGATGTATACCCCGTACGCTTCCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGCGAA
943 T A A C F D R W D L P L S D M Y T P Y V F P S E N G L R C G T R E
3401 TTGAATTATGGCCACACAGTGGCGCGGCGACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCAACTGATGAAACACGACCTCGCCATCTGCTG
977 L N Y G P H Q L A Q F F N I S R Y S Q Q L M E T S H R H L C
3501 ACGCGAAGAAGGCACATGGCTGAATCGACGGTTCCATATGGGGATTGGTGGCGACGACTCTGGAGCCGTCAGTATCGCGGAATTACAGCTGAG
1010 H A E E G T W L N I D G F H M G I G G D D S W S P S V S A E L Q L S

EcoRI (3656)

3601 CGCCGGTCTGCTACCATTACAGTTGGTCTGGTGTCAAAAATAATAATCTAGTCGAGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGAC
1043 A G R Y H Y Q L V W C Q K •
3701 AAACCACAAC TAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTA

3801 ACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAA

3901 ACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAACCTAGCCATGACCAAAATCCCTTAACGTGAGTTTTCTGTCCACTGAGCGTCAGACCCCGTA
PacI (3937)

4001 GAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACACCGCTACCAGCGGTGGTTTTGTTGCCGG

4101 ATCAAGAGCTACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTT

4201 CAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCA

4301 AGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGTTCTGTCACACAGCCAGCTTGAGCGAACGACCTACACCGAACTGAGATACC

4401 TACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGAGAAAGCGGCAGGATATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGA

4501 GCTTCCAGGGGAAACGCCTGGTATCTTTATAGTCTGCTGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGC

4601 CTATGGAAAAACGCCAGCAACGCGGCTTTTTACGGTTCTGGCCTTTTGTGCTGCCTTTTGTCTCACATGTTCTTAATTAATTTTTCAAAGTAGTTGAC
PacI (4677)

4701 AATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGCCATCATGGCCAAGTTGACCAGTGTGTCCAGTGTCCACAGCC
1▶ M A K L T S A V P V L T A

4801 AGGGATGTGGCTGGAGCTGTTGAGTCTGGACTGACAGGTTGGGGTTCTCCAGAGATTTTGTGGAGGATGACTTTGCAGGTGTGGTCAGAGATGATGTCA
14▶ R D V A G A V E F W T D R L G F S R D F V E D D F A G V V R D D V

4901 CCCTGTTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACACCCTGGCTTGGGTGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGA
47▶ T L F I S A V Q D Q V V P D N T L A W V W V R G L D E L Y A E W S E

5001 GGTGGTCTCACCAACTTCAGGGATGCCAGTGGCCTGCCATGACAGAGATTGGAGAGCAGCCCTGGGGGAGAGAGTTTGCCTGAGAGACCCAGCAGGC
80▶ V V S T N F R D A S G P A M T E I G E Q P W G R E F A L R D P A G

5101 AACTGTGTGCACTTTGTGGCAGAGGAGCAGGACTGAGGATAAGAATTGTAACAAAAACCCCGCCCGGGGGTTTTTTGTTAATTAA
114▶ N C V H F V A E E Q D •
PacI (5186)