



100

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTTCACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTCCGCTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGGCTCTCCACGCTTTGCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BspHI (560)  
**AgeI (552)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCATCATGATTCTGGTAACCGAATGCTGATGGTCGTTTTATT  
1 M I P G N R M L M V V L L  
601 ATGCCAAGTCTGCTAGGAGGCGGAGCCATGCTAGTTTGATACCTGAGACCGGGAAGAAAAAGTGCAGGATTGAGGGCCACGCGGGAGGACGCCGC  
13 C Q V L L G G A S H A S L I P E T G K K K V A E I Q G H A G G R R  
701 TCAGGGCAGAGCCATGAGCTCCTGCGGGACTTCGAGGCGACACTTCTACAGATGTTTGGGCTGCGCCGCGTCCGAGCCTAGCAAGAGCGCGCTCATTC  
47 S G Q S H E L L R D F E A T L L Q M F G L R R R P Q P S K S A V I  
801 CGGATTACATGAGGGATCTTTACCGCTCCAGTCTGGGAGGAGGAGGAAGAGCAGAGCCAGGGAACCGGGCTTGGTACCCGGAGCGTCCCGCCAG  
80 P D Y M R D L Y R L Q S G E E E E E Q S Q G T G L E Y P E R P A S  
901 CCGAGCCAACACTGTGAGGAGTTTCCATCACGAAGAACATCTGGAGAACATCCAGGGACAGTGTGAGAGCTCTGCTTTTCGTTTCTCTTCAACTCAGC  
113 R A N T V R S F H H E E H L E N I P G T S E S S A F R F L F N L S  
1001 AGCATCCAGAAAATGAGGTGATCTCCTCGGCAGAGCTCCGGCTCTTTCGGGAGCAGGTGGACCAGGGCCCTGACTGGGAACAGGGCTCCACCGTATAA  
147 S I P E N E V I S S A E L R L F R E Q V D Q G P D W E Q G F H R I  
1101 ACATTTATGAGGTTATGAAGCCCCAGCAGAAAATGGTCTGGACACCTCATCACAGACTACTGGACACCAGACTAGTCCATCACAATGTGACACGGTG  
180 N I Y E V M K P P A E M V P G H L I T R L L D T R L V H H N V T R W  
1201 GGAACCTTTCGATGTGAGCCCTGCAGTCTTCGCTGGACCCGGGAAAGCAACCCAATTATGGGCTGGCCATTGAGGTGACTACCTCCACCAGACACGG  
213 E T F D V S P A V L R W T R E K Q P N Y G L A I E V T H L H Q T R  
1301 ACCCACCAGGGCCAGCATGTCAGAATCAGCCGATCGTTACCTCAAGGGAGTGGAGATTGGGCCAACTCCGGCCCTCCTGTCACTTTTGGCCATGATG  
247 T H Q G Q H V R I S R S L P Q G S G D W A Q L R P L L V T F G H D  
1401 GCCGGGGCATACTTGACCCGAGGAGGGCCAAACGTAGTCCAAGCATCACCCACAGCGGTCCAGGAAGAAGAATAAGAAGTCCGCTGCCATTCACT  
280 G R G H T L T R R R A K R S P K H H P Q R S R K K N K N C R R H S L  
1501 ATACGTGGACTTCAGTGTGAGTGGGCTGGAATGATTGGATTGTGGCCCCACCGGCTACCAGGCCTTCTACTGCCATGGGGACTGTCCCTTTCCACTGGCT  
313 Y V D F S D V G W N D W I V A P P G Y Q A F Y C H G D C P F P L A  
1601 GATCACCTCAACTCAACCAACCATGCCATTGTGCAGACCCTAGTCAACTCTGTTAATCTAGTATCCCTAAGGCCTGTGTGTCCCACTGAAGTGTG  
347 D H L N S T N H A I V R Q T L V N S V N S S I P K A C C V P T E L S  
1701 CCATTTCCATGTTGTACCTGGATGAGTATGACAAGGTGGTGTGAAAATTATCAGGAGATGGTGGTAGAGGGGTGTGGATGCCGCTGAGATCAGGCAGT  
380 A I S M L Y L D E Y D K V V L K N Y Q E M V V E G C G C R •

**NheI (1806)**

1801 CCAGAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTG  
1901 ATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGTTAACAACAACATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGA  
2001 GGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCC  
2101 TTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCCTCACCTTCTTCATGGAGTTAAGATATAGTG  
2201 TATTTTCCAAGTGTGAAGTACTCTTCATTTCTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTAGTAAAATATTCAGAAAATAATTTAAA  
2301 TACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTGTGACTTAGGGAAC  
2401 AAAGAACCTTTAATAGAAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGAC  
141 • N R T Y K L P I L E E I T T K V  
2501 CAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCCAGGAGCATAGTCAGAGATGAGTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTG  
124 L K G N M E I L V F C D P A Y D S I L E R C M G C P S V V R I S R  
2601 TCCACCTCATCAGAGTAGGGGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGA  
90 D V E D S Y P H R V A V I T D F D K Q G N S V A S G I A I A E A C V  
2701 CAGTGACCCTGCCAATGTAGCCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCGCCGACATGGTGTGTTGTCCTCATA  
57 T V R G I Y A E I H V A S I I E G T K T R I A A G V H H K N D E Y

BspHI (2868)

2801 GAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTA  
24 L M T I K E T A V E V L E L D Q Q S I N F T K M  
2901 TACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAG  
3001 ACCTCCCACCGTACACGCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTGATTTTACTAGTCAAACCAAACCTCC  
3101 CATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGC

3201 GATGACTAATACGTAGATGTA  
3301 GGGGGCGTACTTGGCATATGATACACTT  
3401 TTACTATGGGAACATACGTATTATTGACGT  
3501 TTAATTAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTCCATAGGCTCCGCCCCCTGACGAGC  
3601 ATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGT  
3701 TCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAG  
3801 GTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGAC  
3901 ACGACTTATCGCCACTGGCAGCAGCCTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGG  
4001 CTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCT  
4101 GGTAGCGGTGGTTTTTTTGGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGT  
4201 GGAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGT  
4301 GTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAG  
4401 GTGCCAGAACATTTCTCTATCGAA