



1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTTCACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGTTGAGTCCGCTTTCGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

**NcoI (560)**  
**AgeI (552)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCACCGGCCCGCCCTCTGGGTCGCGCTGGTCTTCGA  
135 L Q L W A T G H T V P A Q V V L T P Y K P E P G Y E C Q I S Q E Y  
701 TATGACAGGAAGGCTCAGATGTGCTGTGCTAAGTGCCTCCTGGCCAAATGTGAAACATTTCTGCAACAAGACCTCGGACACCGTGTGTGCGGACTGTG  
147 Y D R K A Q M C C A K C P P G Q Y V K H F C N K T S D T V C A D C  
801 AGGCAAGCATGTATACCCAGGCTGGAACCAAGTTTCGTACATGTTGAGCTGCAGTCTTCTGTACCACTGACCAGGTGGAGATCCGCGCCTGCACTAA  
80 E A S M Y T Q V W N Q F R T C L S C S S S C T T D Q V E I R A C T K  
901 ACAGCAGAACCAGTGTGTGCTTGCGAAGCTGGCAGTACTGCGCCTTGAAACCCATTCTGGCAGTGTGACAGTGCATGAGGCTGAGCAAGTGGCGC  
113 Q Q N R V C A C E A G R Y C A L K T H S G S C R Q C M R L S K C G  
1001 CCTGGCTTCGAGTGGCCAGTCAAGAGCCCCAAATGGAAATGTGCTATGCAAGGCTGTGCCCCAGGGACGTTCTGTACACCACATCATCCACTGATG  
147 P G F G V A S S R A P N G N V L C K A C A P G T F S D T T S S T D  
1101 TGTGACGCCCCACCGCATCTGTAGCATCTGGCTATTCGGGAAATGCAAGCACAGATGCAGTCTGTGCGCCGAGTCCCCAACTCTAAGTGCCATCCC  
180 V C R P H R I C S I L A I P G N A S T D A V C A P E S P T L S A I P  
1201 AAGGACTCTACGTATCTCAGCCAGAGCCACAAGATCCCAACCCCTGGATCAAGAGCCAGGGCCAGCCAAACTCCAAGCATCCTTACATCGTTGGGT  
213 R T L Y V S Q P E P T R S Q P L D Q E P G P S Q T P S I L T S L G

**NheI (1339)**

1301 TCAACCCCATTTATTGAACAAAGTACCAAGGGTGGCTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTATGATG  
247 S T P I I E Q S T K G G •  
1401 AGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACATTGCATTCA  
1501 TTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAAAC  
1601 TTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGACGC  
1701 CTCACCTTCTTTCATGGAGTTTAAAGATAGTGTATTTTCCCAAGGTTTGAAGTACTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTC  
1801 CCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAA  
1901 TATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTT  
2001 GAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGTCTCTGCAC  
135 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 S I L E R C  
2101 ATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGTCTCA  
101 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 K Q G N S V  
2201 CAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGAT  
68 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 G T K T R I  
2301 GGCCGCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGTGAGAGATGTTGAAAGTCT  
35 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 Q S I N F T  
2401 TTCATGGTGGCCCTCTATAGTGAAGTCTATTATACTATGCGGATATACTATGCGGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATC  
1 K M  
2501 TGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAA  
2601 AGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCAGCCCATTTGAT  
2701 GTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGC  
2801 CAGGCGGGCATTACCCTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGAGTTTACCCTAAATACTCCA  
2901 CCCATTGACGTCAATGGAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGG  
3001 GCCATTTACCCTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTCTGG  
3101 CGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGACGCTCAAGTCAAGTCAAGGTTGGCGAAACCCGACAGGACTATAAAGATACCAGCGTT

3201 TCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGAAGCGTGGCGCTTTTCAT  
3301 AGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCG  
3401 GTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGC  
3501 TACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTT  
3601 GGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATC  
3701 CTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGC  
3801 AATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAAC  
3901 TAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA