



1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCCGAGAAGTTGGGGGAGGGTTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

**SphI (560)**  
**AgeI (552)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAGCATGCTGCTCCTGCTGCCGATACTGAACCTGAGCTTACA  
131▶ L H P V A A L F T V T A P K E V Y T V D V G S S V S L E C D F D R  
701 AGAGAATGCACTGAACTGGAAGGGATAAGAGCCAGTTTGCAGAAGGTAGAAAATGATACGCTCTGCAAAAGTAAAAGAGCCACCTGCTGGAGGAGCAGC  
47▶ R E C T E L E G I R A S L Q K V E N D T S L Q S E R A T L L E E Q  
801 TGCCCTGGGAAAGCCTTTGTTCCACATCCCTAGTGTCCAAGTGAGAGATCCGGGAGTACCGTTGCTGCTCATCTCGGGGCGCCTGGGACTACAA  
80▶ L P L G K A L F H I P S V Q V R D S G Q Y R C L V I C G A A W D Y K  
901 GTACCTGACGGTAAAAGTCAAAGCTTACATGAGGATAGACACTAGGATCCTGGAGTTCCAGGTACAGGGGAGGTGCAGCTTACCTGCCAGGCTAGA  
113▶ Y L T V K V K A S Y M R I D T R I L E V P G T G E V Q L T C Q A R  
1001 GGTATCCCTAGCAGAAGTGTCTGGCAAAATGTCAGTGTCTGCAACACCAGCCACATCAGGACCCCCGAAGGCTCTACCAGTCCACAGTGTTC  
147▶ G Y P L A E V S W Q N V S V P A N T S H I R T P E G L Y Q V T S V  
1101 TGCGCCTCAAGCCTCAGCTAGCAGAACTTACGTGCATGTTCTGGAATGCTCACATGAAGGAGCTGACTTCAGCCATCATTGACCTCTGAGTCGGAT  
180▶ L R L K P Q P S R N F S C M F W N A H M K E L T S A I I D P L S R M  
1201 GGAACCCAAAGTCCCAGAACGTGGCCACTTCATGTTTTATCCCGCCTGCACCATCGCTTTGATCTTCTGGCCATAGTGATAATCCAGAGAAAGAGG  
213▶ E P K V P R T W P L H V F I P A C T I A L I F L A I V I I Q R K R

**NheI (1314)**

1301 ATCTAGGGGAAGCTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGA  
247▶ I •  
1401 AATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGTGAATAAACAAGTTAAACAACAATTGCATTCATTTATGTTTCAGGTTACAGGGGAG  
1501 GTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAACTTCTAAAATACAGCATAGCAAACTTAACTCCAAATCAAGCCTCTAC  
1601 TTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTAAG  
1701 ATATAGTGATTTTTCCCAAGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAAT  
1801 AATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACT  
1901 TAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCGGTGACTTGGAGGGGATGAGTTCCTCAATGGTG  
141▶ • N R T Y K L P I L E E I T  
2001 GTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGA  
126▶ 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 M G C P S V V R I  
2101 TGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCTGCTCACAGCAGACCCAATGGCAATGGCTTC  
93▶ 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 A S G I A I A E  
2201 AGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTG  
60▶ 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 A A G V H H K N  
2301 TCCTCATAGAGCATGGTATCTTCTCAGTGGCAGCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAG  
26▶ 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 K M  
2401 TCGTATTACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGC  
2501 TTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTACTAGTCAAAA  
2601 CAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATG  
2701 GTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTGATGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGA  
2801 CGTCAATAGGGGGCTACTTGGCATATGATACACTGATGACTGCCAAGTGGGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAGTCCC  
2901 TATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACG  
3001 CCTGCAGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCC  
3101 TGACGAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCCG

3201 TCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTT  
3301 CGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCC  
3401 GGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCT  
3501 AACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAA  
3601 CCACCGCTGGTAGCGGTGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGA  
3701 CGCTCAGTGGAACGAAAACACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTAC  
3801 ATCTGTGTGTTGGTTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGC  
3901 AAGTGCAGGTGCCAGAACATTTCTCTATCGAA