



100

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCAGCATGCGCCCTGCAGCCCTGCGCGGGCCCTGCTGGGCTG  
1 M R P A A L R G A L L G C  
601 CCTCTGCCTGGCGTTGCTTTGCCTGGCGGTGCGGACAAGCGCTGCGTGACAACCATGAGTGAAAAAACTAATTATGGTTCAGCACTGGCCTGAGACA  
13 L C L A L L C L G G A D K R L R D N H E W K K L I M V Q H W P E T  
701 GTATGCGAGAAAATTCAAAACGACTGTAGAGACCTCCGGATTACTGGACAATACATGGACTATGGCCGATAAAAAGTGAAGGATGTAATAGATCGTGGC  
47 V C E K I Q N D C R D P P D Y W T I H G L W P D K S E G C N R S W  
801 CCTTCAATTTAGAAGAGATTAAGGATCTTTTGCAGAAATGAGGGCATACTGGCCTGACGTAATTCACCTGTTTCCAATCGCAGCCGCTTCTGGAAGCA  
80 P F N L E E I K D L L P E M R A Y W P D V I H S F P N R S R F W K H  
901 TGAGTGGGAAAAGCATGGGACCTGCGCCGCCAGGTGGATGCGCTCAACTCCAGAAGAAGTACTTTGGCAGAAGCTGGAACCTACAGGGAGCTGGAC  
113 E W E K H G T C A A Q V D A L N S Q K K Y F G R S L E L Y R E L D  
1001 CTCAACAGTGTGCTTCTAAAATTTGGGATAAAAACATCCATCAATTAACCAAGTTGCGAGATTTTAAAGATGCCCTCGCCAGAGTATATGGAGTGATAC  
147 L N S V L L K L G I K P S I N Y Y Q V A D F K D A L A R V Y G V I  
1101 CCAAAATCCAGTGCCTTCCACCAAGCCAGGATGAGGAAGTACAGACAATTGGTCAAGTGAAGTGTGCTCACTAAGCAAGACCAGCAGCTGCAAAACTG  
180 P K I Q C L P P S Q D E E V Q T I G Q I E L C L T K Q D Q Q L Q N C  
1201 CACCGAGCCGGGGGAGCAGCCGTCACCAAGCAGGAAGTCTGGCTGGCAAATGGGGCCGCCGAGAGCCGGGTCTGAGAGTCTGTGAAGATGGCCAGTC  
213 T E P G E Q P S P K Q E V W L A N G A A E S R G L R V C E D G P V

**NheI (1340)**

1301 TTCTATCCCCACCTAAAAAGACCAAGCATTGATGCCAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATG  
247 F Y P P P K K T K H •  
1401 CAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATTC  
1501 ATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAAA  
1601 CTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAG  
1701 CCTCACCTCTTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCAGTACCTCCACATT  
1801 CCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATA  
1901 ATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACT  
141 • N R T Y K  
2001 TGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCA  
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 CATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTC  
102 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  
2201 ACAGCAGACCCAAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGCA  
68 V 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 TGCCGCCCCGACATGGTGTGTTGCTCCTATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGGT  
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 CTTCATGGTGGCCCTCTATAGTGAGTCGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTAT  
2 K M  
2501 CTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAA  
2601 AAGTCCGTTGATTTACTAGTCAAACAAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCCTGAGTCAAACCGCTATCCACGCCCATTTGA  
2701 TGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGGCATAATG  
2801 CCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGCAGTTTACCGTAAATACTCC  
2901 ACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATATTGACGTCAATGGGGGGGGTCTTGGCGGTCAGCCAGGGC  
3001 GGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTG  
3101 CGGTTTTTCATAGGCTCCGCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAAGTCAAGGTTGGCGAAACCCGACAGGACTATAAGATACCAGGCGT

3201 TTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCA  
3301 TAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCTTATCC  
3401 GGTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTG  
3501 CTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGT  
3601 TGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGAT  
3701 CCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCG  
3801 CAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAA  
3901 CTAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA