



100

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCCGAGAAGTTGGGGGAGGGTGGCAATTGAACGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGGAAAGTATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGAGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

SphI (560)

AgeI (552)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAGCATGCCCGGGGCTTACCTGGCTGCCTATCTGGGAT  
1 M P R G F T W L R Y L G I  
601 CTTCTTGGCGTGGCCTTGGGGAATGAGCCTTGGAGATGTGGCCTTACGCGAGAATGAGGAGTGCCTGTCACGGGTTTTCTGCGGGACAAGTGCAG  
13 F L G V A L G N E P L E M W P L T Q N E E C T V T G F L R D K L Q  
701 TACAGGAGCCGACTTACATGAAACACTACTTCCCATCAACTACAAGATCAGTGTGCCTTACGAGGGGGTGTTCAGAATCGCCAACGTCAACAGGC  
47 Y R S R L Q Y M K H Y F P I N Y K I S V P Y E G V F R I A N V T R  
801 TGACAGGGCCAGGTGAGCGAGCGGGAGCTGCGGTATCTGTGGTCTTGGTGAAGCTCAGTGCCTGAGTCGGTGCAGGACGTGCTCGAGGGCCA  
80 L Q R A Q V S E R E L R Y L W V L V S L S A T E S V Q D V L L E G H  
901 CCCATCCTGGAAGTACCTGCAGGAGGTGAGACGCTGCTGCTGAATGTCCAGCAGGGCCTCACGGATGTGGAGGTGAGCCCAAGGTGGAATCCGTGTTG  
113 P S W K Y L Q E V E T L L L N V Q Q G L T D V E V S P K V E S V L  
1001 TCCCTCTGAATGCCCGAGGCAACCTGAAGCTGGTGGCGCCAAAGCCCTGCTGGACAATGCTCCGGTTCATGGAGCTGCTGACTGCTCCTGCT  
147 S L L N A P G P N L K L V R P K A L L D N C F R V M E L L Y C S C  
1101 GTAACAAAGCTCCGCTCAAAGTGGCAGGACTGTGAGGTGCCAAGTCTCAGTCTTGCAGCCAGAGCCCTCATTGCAGTATGCGGCCACCCAGCTGTA  
180 C K Q S S V L N W Q D C E V P S P Q S C S P E P S L Q Y A A T Q L Y  
1201 CCCTCCGCCCCGTGGTCCCGAGCTCCCGCTCACTCCACGGGCTCGGTGAGGCCGGTCAAGGCACAGGGCAGGGCCTTGCCTGAGCACCCCTGG  
213 P P P W S P S S P P H S T G S V R P V R A Q G E G L L P •

NheI (1309)

1301 ATGGTACTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT  
1401 GTGATGCTATTGCTTTATTTGTAACCATTATAAGTGAATAAACAAGTTAACAACAACAATTGCATTATTTATGTTTCAGGTTACAGGGGAGGTGTG  
1501 GGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAAACTTAACTCCAAATCAAGCCTCTACTTGAA  
1601 TCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTAAGATATA  
1701 GTGATTTTTCCAAGTTTGAAGTAGCTCTTCAATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAATATTCAGAAATAATTT  
1801 AAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGG  
1901 AACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTCTCGGTGACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTT  
141 • N R T Y K L P I L E E I T T K  
2001 GACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGAT  
125 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 S  
2101 CTGTCCACCTCATCAGAGTAGGGTGCCTGACGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCAC  
91 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 A C  
2201 AGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTC  
58 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 D E  
2301 ATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTA  
25 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 TTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATA  
2501 TAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAACAAC  
2601 TCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT  
2701 AGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCA  
2801 ATAGGGGGCTACTTGGCATATGATACACTTGTACTGCTGCAAGTGGGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTG  
2901 GCGTACTATGGGAACATACGTCAATATTGACGTCAATGGGGGGGGTCTTGGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCCTGC  
3001 AGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACG  
3101 AGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCC

3201 TGTTCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTG  
3301 TAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAA  
3401 GACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTA  
3501 CGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACC  
3601 GCTGGTAGCGGTGGTTTTTTTGTTCGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC  
3701 AGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTCATTACATCTG  
3801 TGTGTTGGTTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTG  
3901 CAGGTGCCAGAACATTTCTCTATCGAA