



1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCTACCTGAGATCACCGGTCCACATGGGGCGGGCAGAGATGCCATCCTGGACGCTTGA  
1▶ M G R A R D A I L D A L E  
601 AAACCTGTGAGGGATGAACTCAAAAGTTCAAGTGAAGCTGCTGACAGTGAACCTGCGAGAAGGCTATGGGCGCATCCCACGCGGGCCCTGCTGCAG  
13▶ N L S G D E L K K F K M K L L T V Q L R E G Y G R I P R G A L L Q  
701 ATGGACGCATAGATCTCACTGACAACTTGTGAGTACTATCTGGAGTCGTATGGCTTGGAGCTCACAATGACTGTGCTTAGAGACATGGGCTTACAGG  
47▶ M D A I D L T D K L V S Y Y L E S Y G L E L T M T V L R D M G L Q

**NheI (844)**

801 AGCTGGCTGAGCAGTGCACAACTGAAAGAGTCTGGATGAGCTAGTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAG  
80▶ E L A E Q L Q T T K E E S G •  
901 AATGCAGTGAATAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGTGCATAAACAAGTTAACAACAACAATTGC

1001 ATTCATTTTATGTTTCAGGTTTCCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGC  
1101 AAAACTTTAACCTCCAATCAAGCCTCTACTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTT  
1201 GCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCA  
1301 CATTCCCTTTTATGATAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTT  
1401 CATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCGGTG  
141 • N R T  
1501 TACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTC  
136▶ Y K 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  
1601 TGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCACCTCATCAGATAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTT  
103▶ C 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  
1701 GCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTGGTC  
70▶ S 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  
1801 CTGATGGCCGCCCCGACATGGTCTTGTGTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGA  
36▶ R I 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  
1901 AGGTTTCATGCTGGCCCTCTATAGTGAAGTCTATTACTATGCGGATATACTATGCGGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGC  
3▶ T K M  
2001 TATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTT  
2101 TGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGTATCCACGCCCA  
2201 TTGATGACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCATGACTGGGCAT  
2301 AATGCCAGGCGGGCATTACCCTGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCGAGTTTACCCTAAATA  
2401 CTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCA  
2501 GCGGGCCATTACCCTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTT  
2601 GCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCAGCGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCA  
2701 GCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCAGTACTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTT  
2801 CTCATAGCTCACGCTGTAGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTT  
2901 ATCCGGTAACTATCGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAA  
3001 GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAA  
3101 GAGTTGGTAGCTCTTGTATCCGGCAAACAAACCCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGA

3201 AGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCG

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3301 GCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAA

3401 CAAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA