



100

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCGAGAAGTTGGGGGAGGGTGGCAATTGAACGGTGCCTA
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGTTGAGTCCGCTTCTGCCGCTCCCGCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

AgeI (552) BspHI (568)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTAGGAGGGCCATGACCCCTGGCTCGGGCTCATCGTGCTC
1▶ M T P W L G L I V L
601 CTGGGAGCTGGAGCCTGGGGACTGGGGCGCCGAGCGTGCACATGCTCGCCAGCCACCCAGGACGCTTCTGCAACTCCGACATCGTATCCGGG
11▶ L G S W S L G D W G A E A C T C S P S H P Q D A F C N S D I V I R
701 CCAAGGTGGTGGGAAGAAGCTGGTAAAGGAGGGCCCTTCGGCAGCTGGTCTACACCATCAAGCAGATGAAGATGTACCGAGGCTTACCAAGATGCC
44▶ A K V V G K K L V K E G P F G T L V Y T I K Q M K M Y R G F T K M P
801 CCATGTGCAGTACATCCAACGGAAGCTTCGAGAGTCTCTGTGGCCTAAGCTGGAGGTCAACAAGTACCAGTACCTGCTGACAGGTCGCGTCTATGAT
77▶ H V Q Y I H T E A S E S L C G L K L E V N K Y Q Y L L T G R V Y D
901 GGCAAGATGTACCGGGCTGTGCAACTTCGTGGAGAGTGGGACAGCTCACCTCTCCAGCGCAAGGGGCTGAACATCGGTATCACCTGGTGTGA
111▶ G K M Y T G L C N F V E R W D Q L T L S Q R K G L N Y R Y H L G C
1001 ACTGCAAGATCAAGTCTGCTACTACCTGCCTTGTGACTTCCAAGAACGAGTGTCTCTGGACCGACATGCTCTCCAATTCGTTACCTGGCTA
144▶ N C K I K S C Y Y L P C F V T S K N E C L W T D M L S N F G Y P G Y
1101 CCAGTCCAAACTACGCTGCATCCGGCAGAAAGGGCGCTACTGCAGCTGGTACCGAGGATGGGCCCCCGGATAAAAGCATCATCAATGCCACAGAC
177▶ Q S K H Y A C I R Q K G G Y C S W Y R G W A P P D K S I I N A T D

NheI (1242)

1201 CCCTGAGCGCCAGACCCTGCCCCACCTCACTTCCCTCCCTCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTAGAA
211▶ P •
1301 TGCAGTAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGTGCATAAACAAGTTAACAACAACAATTGCAT

1401 TCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAA
1501 AACTTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGC
1601 AGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTCTTCATTTCTTATGTTTTAAATGACTGACCTCCCACA
1701 TTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCA
1801 TAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTGA
141▶ • N R T Y
1901 CTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTG
136▶ 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
2001 ACATGCCACAGGGGTGACCACCTGATGGATCTGTCCACCTCAGAGTAGGGTGGCTGACAGCCACAATGGTGTCAAAGTCCCTCTGCCCGTTGC
102▶ C M G C P S 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
2101 TCACAGCAGACCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCT
69▶ 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
2201 GATGGCCGCCGACATGGTGTGTTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAG
36▶ 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
2301 GTCTTCATGGTGGCCCTCTATAGTGAAGTATTACTATGCGGATATACTATGCGGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTT
2▶ T K M
2401 ATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTG
2501 GAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATT
2601 GATGTAAGTCCAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGGCATAA
2701 TGCCAGGCGGGCATTACCCTCATTGACGTCAATAGGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACT
2801 CCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGGGGGGTCTTGGCGGTCAGCCAGG
2901 CGGGCCATTTACCCTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGC
3001 TGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGC
3101 GTTTCCCCCTGGAAGCTCCCTCGTGGCTCTCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCT

3201 CATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCCTTAT
3301 CCGGTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGG
3401 TGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGA
3501 GTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAG
3601 ATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGC
3701 CGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACA
3801 AACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA