



125

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCCGAGAAGTTGGGGGAGGGTTCGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGCTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)

AgeI (552)

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGGTACCATGGGAACCCAAAGCCACGGATCCTGCCCTGGCTGGT
1 M G T P K P R I L P W L V
601 GTCGACGCTGGACCTGGGGCAACTGGAGGGCTGGCTGGGTGAACAAGACGCCACGCGCTTCCGCATCCCTTGAAGCACGGCCTACGGCAGGATGCA
13 S Q L D L G Q L E G V A W V N K S R T R F R I P W K H G L R Q D A
701 CAGCAGGAGGATTTCCGAATCTCCAGGCTGGGCCGAGGCCACTGGTGCATATGTTCCGGGAGGGATAAGCCAGACCTGCCAACCTGGAAGAGGAATT
47 Q Q E D F G I F Q A W A E A T G A Y V P G R D K P D L P T W K R N
801 TCCGCTCTGCCCTCAACCGCAAAGAAGGTTGCGTTTACGAGAGGACCGGAGCAAGGACCCTCACGACCCACATAAAATCTACGAGTTTGTAACTCAGG
80 F R S A L N R K E G L R L A E D R S K D P H D P H K I Y E F V N S G
901 AGTTGGGACTTTCCAGCCAGACACCTCTCCGACACCAATGGTGGAGGACGATCTCTGATACCCAGGAAGACATTCTGGATGAGTTACTGGGTAAAC
113 V G D F S Q P D T S P D T N G G G S T S D T Q E D I L D E L L G N
1001 ATGGTGTGGCCCACTCCAGATCCGGGACCCCAAGCCTGGCTGTAGCCCTGAGCCCTGCCCTCAGCCCTGCGGAGCCCGAGCTGGACAATCCCA
147 M V L A P L P D P G P P S L A V A P E P C P Q P L R S P S L D N P
1101 CTCCTTCCCAAACCTGGGGCCCTGTGAGAACCCTAGAACGGCTGTGGTGGCCGGGGAAGAGTGGGAGTTCGAGGTGACAGCCTTCTACCGGGGCCG
180 T P F P N L G P S E N P L K R L L V P G E E W E F E V T A F Y R G R
1201 CCAAGTCTCCAGCAGACCATCTCTGCCCGGAGGGCTGCGGCTGGTGGGTCCGAAGTGGGAGACAGGACGCTGCTGGATGGCCAGTCACACTGCCA
213 Q V F Q Q T I S C P E G L R L V G S E V G D R T L P G W P V T L P
1301 GACCCTGGCATGCTTACAGACAGGAGTGTGAGCTACGTGAGGATGTGCTGAGCTGCCTGGTGGGGACTGGCTCTGGCGGGCCGGCCAGT
247 D P G M S L T D R G V M S Y V R H V L S C L G G G L A L W R A G Q
1401 GGCTCTGGGCCACGCGCTGGGGCACTGCCACACATACTGGGCAGTGAAGCAGGAGCTGCTCCCAACAGCGGGCATGGGCTGATGGCGAGTCCCAA
280 W L W A Q R L G H C H T Y W A V S E E L L P N S G H G P D G E V P K
1501 GGACAAGGAAGGAGGCGTGTGACCTGGGGCCCTTATTGTAGATCTGATTACCTTACGGAAGGAAGCGGACGCTCACCACGCTATGCCCTCTGGTTC
313 D K E G G V F D L G P F I V D L I T F T E G S G R S P R Y A L W F
1601 TGTGTGGGGGAGTCATGGCCCAAGGACCGCTGGACCAAGAGGCTCGTGTGGTCAAGGTTGTGCCACGTGCCTCAGGGCCTTGGTAGAAATGGCC
347 C V G E S W P Q D Q P W T K R L V M V K V V P T C L R A L V E M A
1701 GGGTAGGGGTGCTCCTCCCTGGAGAATACTGTGACCTGACATTTCCAACAGCCCACTCTCCTCAGCTCCGACAGTACAAGGCCTACCTGCA
380 R V G G A S S L E N T V D L H I S N S H P L S L T S D Q Y K A Y L Q
1801 GGACTTGGTGGAGGCATGGATTTTCAGGGCCCTGGGAGACCGGATCCTATCCCTATGATGTGCCAGACTATGCTGGCTATCCATATGATGTTCTGAT
413 D L V E G M D F Q G P G E T G S Y P Y D V P D Y A G Y P Y D V P D

NheI (1940)

1901 TATGCTGGATACCTTATGATGTGCCAGACTATGCCTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATG
447 Y A G Y P Y D V P D Y A •
2001 CAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTC
2101 ATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAAA
2201 CTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAG
2301 CCTCACCTTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCAGTACCTCCACATT
2401 CCCTTTTATGATAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATA
2501 ATATCCCCAGTTTATGATGTTGACTTAGGGAACAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTATGTTCTGGTGTACT
141 • N R T Y K
2601 TGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCA
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
2701 CATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTC
102 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
2801 ACAGCAGACCCAATGGCAATGGCTTCCAGCAGACAGTGAACCTGCCAATGTAGGCTCAATGTGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGGA
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
2901 TGGCCGCCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCAGCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGGT
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
3001 CTTGATGATGCTTCTATAGTGTGATGCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTAT
2 K M
3101 CTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGA

3201 AAGTCCC GTT GATTTACTAGT CAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGA
3301 TGTA CTGCCAAAACCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAAGGCATGTACTGGGCATAATG
3401 CCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCC
3501 ACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCG
3601 GGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTG
3701 GCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGT
3801 TTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCA
3901 TAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACAGCCGACCGCTGCGCCTTATCC
4001 GGTA ACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAA CAGGATTAGCAGAGCGAGGTATGTAGGCGGTG
4101 CTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGT
4201 TGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGAT
4301 CCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCG
4401 CAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAAA
4501 CTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA