



1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCGGAGAAGTTGGGGGAGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGGCTCTCCACGCTTTGCCTGACCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BspLU111 (560)

AgeI (552)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAACATGATTCCAATGTGATAGGAACTGTAACCTCTGGAAA
1 M Y S N V I G T V T S G K
601 AAGGAAGTGTATCTTTTGTCTTGTCTCATTGGCTTCTGGGACTGCGTGACCTGTACGGGAGCCCTGTGGACATCTGCACAGCAAGCCGCGGGAC
13 R K V Y L L S L L L I G F W D C V T C H G S P V D I C T A K P R D
701 ATCCCATGAATCCCATGTGCATTTACCGCTCCCGGAGAAGAAGGCAACTGAGGATGAGGGCTCAGAACAGAAGATCCCGGAGGCCACCAACCGCGGTG
47 I P M N P M C I Y R S P E K K A T E D E G S E Q K I P E A T N R R
801 TCTGGAACTGTCCAAGGCAATCCCGCTTTGCTACCACTTCTATCAGCACCTGGCAGATTCCAAGAATGACAATGATAACATTTTCTGTACCCT
80 V W E L S K A N S R F A T T F Y Q H L A D S K N D N D N I F L S P L
901 GAGTATCTCCACGGCTTTTGTATGACCAAGCTGGTGCCTGTAATGACACCTCCAGCAACTGATGGAGGATTTAAGTTTACACCATATCTGAGAAA
113 S I S T A F A M T K L G A C N D T L Q Q L M E V F K F D T I S E K
1001 ACATCTGATCAGATCCACTTCTTTTGCCTTGTCTTGTCCAACTGAACTGCCGACTCTATCGAAAAGCAACAAATCCTCAAGTTAGTATCAGCCAATCGCCTTTTGT
147 T S D Q I H F F F A K L N C R L Y R K A N K S S K L V S A N R L F
1101 GAGACAAATCCCTTACCTTCAATGAGACCTACCAGGACATCAGTGAGTTGGTATATGGAGCCAAGCTCCAGCCCTGGACTTCAAGGAAAATGCAGAGCA
180 G D K S L T F N E T Y Q D I S E L V Y G A K L Q P L D F K E N A E Q
1201 ATCCAGAGCGGCATCAACAAATGGGTGTCCAATAAGACCGAAGGCGAATCACCAGTGTCTTCCCTCGGAAGCCATCAATGAGCTCACTGTTCTGGTG
213 S R A A I N K W V S N K T E G R I T D V I P S E A I N E L T V L V
1301 CTGGTTAACACCATTTACTTCAAGGGCTGTGGAAGTCAAAGTTCAGCCCTGAGAACAAGGAAGGAACTGTTCTACAAGGCTGATGGAGAGTCGTGTT
247 L V N T I Y F K G L W K S K F S P E N T R K E L F Y K A D G E S C
1401 CAGCATCTATGATGTACCAGGAAGCAAGTTCGGTTATCGGCGGTGGCTGAAGGCACCCAGGTGCTTGTGAGTTGCCCTTCAAAGGTGATGACATCACCAT
280 S A S M M Y Q E G K F R Y R R V A E G T Q V L E L P F K G D D I T M
1501 GGTCTCATCTTGCCCAAGCCTGAGAAGAGCCTGGCCAAGGTAGAGAAGGAACTCACCCAGAGGTGCTGCAAGAGTGGTGGATGAATTGGAGGAGATG
313 V L I L P K P E K S L A K V E K E L T P E V L Q E W L D E L E E M
1601 ATGCTGGTGGTCCACATCCCGCTTCCGATTGAGGACGGCTTCAGTTTGAAGGAGCAGTGCAGAGCATGGGCTTGTGATCTGTTCCAGCCCTGAAA
347 M L V V H M P R F R I E D G F S L K E Q L Q D M G L V D L F S P E
1701 AGTCCAACTCCAGGTATTGTTGCAGAAGGCCGAGATGACCTCTATGTCTCAGATGCATTCCATAAGGCATTTCTTGTAGGTAATGAAGAAGGCAGTGA
380 K S K L P G I V A E G R D D L Y V S D A F H K A F L E V N E E G S E
1801 AGCAGTCAAGTACCGTGTGTTGATTGCTGGCCGTTGCTAAACCCCAACAGGGTACTTTCAAGGCAACAGGCCCTTCTGTTTATAAGAGAA
413 A A A S T A V V I A G R S L N P N R V T F K A N R P F L V F I R E

NheI (1992)

1901 GTTCTCTGAACACTATTATCTTCATGGGAGAGTAGCCAACCCTTGTGTTAAGTAAATGTTCTTATTCTTTGCACCTTCTCCTATTTTTGGCTAGCTG
447 V P L N T I I F M G R V A N P C V K •
2001 GCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTA
2101 TTTGTAACCATTATAAGTCAATAAACAAGTTAACAACAACAATTGCATTATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCA
2201 AGTAAACCTCTACAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATG
2301 AATAAGGCATAGGCATCAGGGGCTGTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGT
2401 TTGAAGTACTCTTATTTCTTTATGTTTTAAATGCACTGACCTCCACATCCCTTTTTAGTAAATATTAGAAATAATTTAAATACATCATTGCAAT
2501 GAAAATAAATGTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAA
2601 TAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCA
141 • N R T Y K L P I L E E I T T K V L K G N M
2701 TCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATGACA
119 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 R D V E D S
2801 GTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTGTCTCAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCTGCCA
86 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 V T V R G
2901 ATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCT
52 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 Y L M T I K
3001 TCTCAGTGGGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGAT
19 E T A V E V L E L D Q Q S I N F T K M
3101 ACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTAC

3201 ACGCCTACGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATG
GGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCCATTTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGT
AGATGTACTGCCAAGTAGGAAAGTCCCATAGGTCATGTAAGTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGG
CATATGATACACTTGATGTAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACA
TACGTCATTATTGACGTCAATGGGCGGGGTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGAGGTTAATAAGAACAT
GTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAGGCCGCGTTGCTGGCGTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGA
CGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGTCCCTCGTGGCTCTCTGTTCCGACCCTGCCGC
TTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTGCTCCAA
GCTGGGCTGTGTGCAGAACCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAA
CTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAA
CAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGATTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTT
TTTTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCA
CGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTGTG
TGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGAAGTGCAGGTGCCAGAACATTT
CTCTATCGAA

BspLU11I (36 96)