



1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATGCCACAGTCCCCGAGAAGTTGGGGGAGGGTTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGGTAAACTGGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCCTCCCGCTGTGGTGCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BspLU111 (560)

Agel (552)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAACATGTCCTGGCGCCGAGCGTGGCGGGCTGGCTGGGTGG  
133 F L L V P A L G M I P P P E K V R M N S V N F K N I L Q W E V P A  
701 TTCCCAAACGAACCTGACTTTACAGCTCAGTATGAAAAGTTACAGGCTTTTCCAAGTCACTGCAAGCGCACTGCCTCGACTCAGTGCAGCTTCTCTC  
47 F P K T N L T F T A Q Y E S Y R S F Q D H C K R T A S T Q C D F S  
801 ATCTTTCTAAATACGGAGACTACACTGTGAGAGTCAGGCTGAATTGGCGGATGAACATTCGGAGTGGGTCAATGTACCTTCTGCCCCGTTGGAAGACAC  
80 H L S K Y G D Y T V R V R A E L A D E H S E W V N V T F C P V E D T  
901 CATCATTGGACCTCTGAGATGCAGATAGAATCCCTTGCTGAGTCTTTACACCTGCGTTTCTCAGCCCCACAAATTGAGAATGAGCCTGAGACGTGGACC  
113 I I G P P E M Q I E S L A E S L H L R F S A P Q I E N E P E T W T  
1001 TTGAAGAACATTTATGACTCATGGGCTTACAGAGTGAATACTGGAAAATGGGACTAATGAGAAGTTTCAAGTTGTGTCTCCGTACGACTCTGAGGTCC  
147 L K N I Y D S W A Y R V Q Y W K N G T N E K F Q V V S P Y D S E V  
1101 TCCGGAACCTGGAGCCGTGGACAACCTACTGCATTCAAGTTCAAGGGTTTCTCTCGACCAGAACAGAACAGGAGAGTGGAGTGAACCCATCTGTGAACG  
180 L R N L E P W T T Y C I Q V Q G F L L D Q N R T G E W S E P I C E R  
1201 GACAGCAATGACGAAATAACCCCTTCTGGATTGTGGCCATCATCTCATAGTCTCCGTCCTGGTGGTCTTCTCTCTCTCTCTGGGCTGCTTGTGCGTG  
213 T G N D E I T P S W I V A I I L I V S V L V V F L F L L G C F V V  
1301 CTGTGGCTCATTATAAGAAGACCAAGCATACTTCCGTTCTGGGACGTCTTCCACAGCACCTGAAGGAGTTTCTGGGCCACCCCATCACAGCACGT  
247 L W L I Y K K T K H T F R S G T S L P Q H L K E F L G H P H H S T  
1401 TTCTGCTGTTCTCTTCCCTCCCGGAGGAGCGGAGGTGTCGACAACTAAGCATCATCAGCGAAGAGTCTGAAGGCAGCAAGCAGAGTCTGAAGA  
280 F L L F S F P P P E E A E V F D K L S I I S E E S E G S K Q S P E D  
1501 CAACTGTGCTCAGAGCCCCGTCTGATCCAGGCTCGGGAGCTGGAGTCCAAGGATGAAGTCCCTCACCTCCACAGATGACCCCAAAGTCTCAGC  
313 N C A S E P P S D P G P R E L E S K D E A P S P P H D D P K L L T

NheI (1634)

1601 TCGACCTCAGAAGTATGACCAGAGAGCCACCTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTGGGACAAACCACAAGTGAAGTGCAGTGA  
347 S T S E V •  
1701 AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAAATTGCATTATTTTA  
1801 TGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAA  
1901 CCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCAC  
2001 CTTCTTTTCATGGAGTTTAAAGATATAGTATTTTCCCAAGGTTTGAAGTACTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTT  
2101 TTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCC  
2201 CCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGG  
141 • N R T Y K L P  
2301 GGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAAGATGAGTCTCTGCACATGCC  
133 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 M G  
2401 ACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCTGCTCACAGCA  
100 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 S V A  
2501 GACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCG  
66 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 A A  
2601 CCCCAGATGGTCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTTCAT  
33 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 K M  
2701 GGTGGCCCTCTATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACG  
2801 GTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCC  
2901 CGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGTGGAGACTTGAAATCCCGTGAAGTCAAACCGCTATCCAGCCCATGATGTACT  
3001 GCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTGATGTACTGGGCATAATGCCAGGC  
3101 GGGCATTACCGTCAATGAGGGGCTACTTGGCATATGATACTTGTACTGCTCAAGTGGGCGAGTTTACCGTAAATACTCCACCCAT

3201 TGACGTCAATGGAAAGTCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGCGGGGGTCGTTGGCGGGTCAGCCAGGCGGGCCAT

BspLU11I (3338)

3301 TTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTT

3401 TTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCC

3501 CTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTC

3601 ACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAAC

3701 TATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAG

3801 AGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAG

3901 CTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTG

4001 ATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAA

4101 AATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCA

4201 AAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTATCGAA