pEG202 (UCU89960)

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                                   pBr ori
      1  AGCTGCATGT GTCAGAGGTT TTCACCGTCA TCACCGAAAC GCGCGAGGCA
         TCGACGTACA CAGTCTCCAA AAGTGGCAGT AGTGGCTTTG CGCGCTCCGT
                                          ADH1 promoter
     51  GGATGATCCG GGATCGAAGA AATGATGGTA AATGAAATAG GAAATCAAGG
         CCTACTAGGC CCTAGCTTCT TTACTACCAT TTACTTTATC CTTTAGTTCC
                                   ADH1 promoter
    101  AGCATGAAGG CAAAAGACAA ATATAAGGGT CGAACGAAAA ATAAAGTGAA
         TCGTACTTCC GTTTTCTGTT TATATTCCCA GCTTGCTTTT TATTTCACTT
                                   ADH1 promoter
    151  AAGTGTTGAT ATGATGTATT TGGCTTTGCG GCGCCGAAAA AACGAGTTTA
         TTCACAACTA TACTACATAA ACCGAAACGC CGCGGCTTTT TTGCTCAAAT
                                   ADH1 promoter
    201  CGCAATTGCA CAATCATGCT GACTCTGTGG CGGACCCGCG CTCTTGCCGG
         GCGTTAACGT GTTAGTACGA CTGAGACACC GCCTGGGCGC GAGAACGGCC
                                   ADH1 promoter
    251  CCCGGCGATA ACGCTGGGCG TGAGGCTGTG CCCGGCGGAG TTTTTTGCGC
         GGGCCGCTAT TGCGACCCGC ACTCCGACAC GGGCCGCCTC AAAAAACGCG
                                   ADH1 promoter
    301  CTGCATTTTC CAAGGTTTAC CCTGCGCTAA GGGGCGAGAT TGGAGAAGCA
         GACGTAAAAG GTTCCAAATG GGACGCGATT CCCCGCTCTA ACCTCTTCGT
                                   ADH1 promoter
    351  ATAAGAATGC CGGTTGGGGT TGCGATGATG ACGACCACGA CAACTGGTGT
         TATTCTTACG GCCAACCCCA ACGCTACTAC TGCTGGTGCT GTTGACCACA
                                   ADH1 promoter
    401  CATTATTTAA GTTGCCGAAA GAACCTGAGT GCATTTGCAA CATGAGTATA
         GTAATAAATT CAACGGCTTT CTTGGACTCA CGTAAACGTT GTACTCATAT
                                   ADH1 promoter
    451  CTAGAAGAAT GAGCCAAGAC TTGCGAGACG CGAGTTTGCC GGTGGTGCGA
         GATCTTCTTA CTCGGTTCTG AACGCTCTGC GCTCAAACGG CCACCACGCT
                                   ADH1 promoter
    501  ACAATAGAGC GACCATGACC TTGAAGGTGA GACGCGCATA ACCGCTAGAG
         TGTTATCTCG CTGGTACTGG AACTTCCACT CTGCGCGTAT TGGCGATCTC
                                   ADH1 promoter
    551  TACTTTGAAG AGGAAACAGC AATAGGGTTG CTACCAGTAT AAATAGACAG
         ATGAAACTTC TCCTTTGTCG TTATCCCAAC GATGGTCATA TTTATCTGTC
                                   ADH1 promoter
    601  GTACATACAA CACTGGAAAT GGTTGTCTGT TTGAGTACGC TTTCAATTCA
         CATGTATGTT GTGACCTTTA CCAACAGACA AACTCATGCG AAAGTTAAGT
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                                ADH1 promoter
     651  TTTGGGTGTG CACTTTATTA TGTTACAATA TGGAAGGGAA CTTTACACTT
          AAACCCACAC GTGAAATAAT ACAATGTTAT ACCTTCCCTT GAAATGTGAA
                                ADH1 promoter
                                PacI
     701  CTCCTATGCA CATATATTAA TTAAAGTCCA ATGCTAGTAG AGAAGGGGGG
          GAGGATACGT GTATATAATT AATTTCAGGT TACGATCATC TCTTCCCCCC
                                ADH1 promoter
     751  TAACACCCCT CCGCGCTCTT TTCCGATTTT TTTCTAAACC GTGGAATATT
          ATTGTGGGGA GGCGCGAGAA AAGGCTAAAA AAAGATTTGG CACCTTATAA
                                ADH1 promoter
     801  TCGGATATCC TTTTGTTGTT TCCGGGTGTA CAATATGGAC TTCCTCTTTT
          AGCCTATAGG AAAACAACAA AGGCCCACAT GTTATACCTG AAGGAGAAAA
                                ADH1 promoter
     851  CTGGCAACCA AACCCATACA TCGGGATTCC TATAATACCT TCGTTGGTCT
          GACCGTTGGT TTGGGTATGT AGCCCTAAGG ATATTATGGA AGCAACCAGA
                                ADH1 promoter
     901  CCCTAACATG TAGGTGGCGG AGGGGAGATA TACAATAGAA CAGATACCAG
          GGGATTGTAC ATCCACCGCC TCCCCTCTAT ATGTTATCTT GTCTATGGTC
                                ADH1 promoter
     951  ACAAGACATA ATGGGCTAAA CAAGACTACA CCAATTACAC TGCCTCATTG
          TGTTCTGTAT TACCCGATTT GTTCTGATGT GGTTAATGTG ACGGAGTAAC
                                ADH1 promoter
    1001  ATGGTGGTAC ATAACGAACT AATACTGTAG CCCTAGACTT GATAGCCATC
          TACCACCATG TATTGCTTGA TTATGACATC GGGATCTGAA CTATCGGTAG
                                ADH1 promoter
    1051  ATCATATCGA AGTTTCACTA CCCTTTTTCC ATTTGCCATC TATTGAAGTA
          TAGTATAGCT TCAAAGTGAT GGGAAAAAGG TAAACGGTAG ATAACTTCAT
                                ADH1 promoter
    1101  ATAATAGGCG CATGCAACTT CTTTTCTTTT TTTTTCTTTT CTCTCTCCCC
          TATTATCCGC GTACGTTGAA GAAAAGAAAA AAAAAGAAAA GAGAGAGGGG
                                ADH1 promoter
    1151  CGTTGTTGTC TCACCATATC CGCAATGACA AAAAAAATGA TGGAAGACAC
          GCAACAACAG AGTGGTATAG GCGTTACTGT TTTTTTTACT ACCTTCTGTG
                                ADH1 promoter
    1201  TAAAGGAAAA AATTAACGAC AAAGACAGCA CCAACAGATG TCGTTGTTCC
          ATTTCCTTTT TTAATTGCTG TTTCTGTCGT GGTTGTCTAC AGCAACAAGG
                                ADH1 promoter
    1251  AGAGCTGATG AGGGGTATCT TCGAACACAC GAAACTTTTT CCTTCCTTCA
          TCTCGACTAC TCCCCATAGA AGCTTGTGTG CTTTGAAAAA GGAAGGAAGT
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                                ADH1 promoter
1301  TTCACGCACA CTACTCTCTA ATGAGCAACG GTATACGGCC TTCCTTCCAG
      AAGTGCGTGT GATGAGAGAT TACTCGTTGC CATATGCCGG AAGGAAGGTC
                                ADH1 promoter
1351  TTACTTGAAT TTGAAATAAA AAAAGTTTGC CGCTTTGCTA TCAAGTATAA
      AATGAACTTA AACTTTATTT TTTTCAAACG GCGAAACGAT AGTTCATATT
                                ADH1 promoter
1401  ATAGACCTGC AATTATTAAT CTTTTGTTTC CTCGTCATTG TTCTCGTTCC
      TATCTGGACG TTAATAATTA GAAAACAAAG GAGCAGTAAC AAGAGCAAGG
                                ADH1 promoter
1451  CTTTCTTCCT TGTTTCTTTT TCTGCACAAT ATTTCAAGCT ATACCAAGCA
      GAAAGAAGGA ACAAAGAAAA AGACGTGTTA TAAAGTTCGA TATGGTTCGT
       ADH1 promoter   HindIII                          LexA
  +2                                                     M   K   A   L   T ·
1501  TACAATCAAC TCCAAGCTTG AATTAATTCC GGGCGGAATG AAAGCGTTAA
      ATGTTAGTTG AGGTTCGAAC TTAATTAAGG CCCGCCTTAC TTTCGCAATT
                                LexA
  +2 · T   A   R   Q   Q   E   V   F   D   L   I   R   D   H   I   S   Q
1551  CGGCCAGGCA ACAAGAGGTG TTTGATCTCA TCCGTGATCA CATCAGCCAG
      GCCGGTCCGT TGTTCTCCAC AAACTAGAGT AGGCACTAGT GTAGTCGGTC
                                LexA
  +2   T   G   M   P   P   T   R   A   E   I   A   Q   R   L   G   F   R ·
1601  ACAGGTATGC CGCCGACGCG TGCGGAAATC GCGCAGCGTT TGGGGTTCCG
      TGTCCATACG GCGGCTGCGC ACGCCTTTAG CGCGTCGCAA ACCCCAAGGC
                                LexA
  +2· R   S   P   N   A   A   E   E   H   L   K   A   L   A   R   K   G   V ·
1651  TTCCCCAAAC GCGGCTGAAG AACATCTGAA GGCGCTGGCA CGCAAAGGCG
      AAGGGGTTTG CGCCGACTTC TTGTAGACTT CCGCGACCGT GCGTTTCCGC
                                LexA
  +2 · V   I   E   I   V   S   G   A   S   R   G   I   R   L   L   Q   E
1701  TTATTGAAAT TGTTTCCGGC GCATCACGCG GGATTCGTCT GTTGCAGGAA
      AATAACTTTA ACAAAGGCCG CGTAGTGCGC CCTAAGCAGA CAACGTCCTT
                                LexA
  +2   E   E   E   G   L   P   L   V   G   R   V   A   A   G   E   P   L ·
1751  GAGGAAGAAG GGTTGCCGCT GGTAGGTCGT GTGGCTGCCG GTGAACCACT
      CTCCTTCTTC CCAACGGCGA CCATCCAGCA CACCGACGGC CACTTGGTGA
                                LexA
  +2· L   L   A   Q   Q   H   I   E   G   H   Y   Q   V   D   P   S   L   F ·
1801  TCTGGCGCAA CAGCATATTG AAGGTCATTA TCAGGTCGAT CCTTCCTTAT
      AGACCGCGTT GTCGTATAAC TTCCAGTAAT AGTCCAGCTA GGAAGGAATA
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                                                  LexA
      +2 · F   K   P   N   A   D   F   L   L   R   V   S   G   M   S   M   K
1851     TCAAGCCGAA TGCTGATTTC CTGCTGCGCG TCAGCGGGAT GTCGATGAAA
         AGTTCGGCTT ACGACTAAAG GACGACGCGC AGTCGCCCTA CAGCTACTTT
                                                  LexA
      +2   D   I   G   I   M   D   G   D   L   L   A   V   H   K   T   Q   D ·
1901     GATATCGGCA TTATGGATGG TGACTTGCTG GCAGTGCATA AAACTCAGGA
         CTATAGCCGT AATACCTACC ACTGAACGAC CGTCACGTAT TTTGAGTCCT
                                                  LexA
      +2· D   V   R   N   G   Q   V   V   V   A   R   I   D   D   E   V   T   V ·
1951     TGTACGTAAC GGTCAGGTCG TTGTCGCACG TATTGATGAC GAAGTTACCG
         ACATGCATTG CCAGTCCAGC AACAGCGTGC ATAACTACTG CTTCAATGGC
                                                  LexA
      +2 · V   K   R   L   K   K   Q   G   N   K   V   E   L   L   P   E   N
2001     TTAAGCGCCT GAAAAAACAG GGCAATAAAG TCGAACTGTT GCCAGAAAAT
         AATTCGCGGA CTTTTTTGTC CCGTTATTTC AGCTTGACAA CGGTCTTTTA
                                                  LexA
                   PmeI
      +2   S   E   F   K   P   I   V   V   D   L   R   Q   Q   S   F   T   I ·
2051     AGCGAGTTTA AACCAATTGT CGTAGATCTT CGTCAGCAGA GCTTCACCAT
         TCGCTCAAAT TTGGTTAACA GCATCTAGAA GCAGTCGTCT CGAAGTGGTA
                                          LexA
                                                                   EcoRI
      +2· I   E   G   L   A   V   G   V   I   R   N   G   D   W   L
2101     TGAAGGGCTG GCGGTTGGGG TTATTCGCAA CGGCGACTGG CTGGAATTCC
         ACTTCCCGAC CGCCAACCCC AATAAGCGTT GCCGCTGACC GACCTTAAGG
             BamHI          NcoI           XhoI
2151     CGGGGATCCG TCGACCATGG CGGCCGCTCG AGTCGACCTG CAGCCAAGCT
         GCCCCTAGGC AGCTGGTACC GCCGGCGAGC TCAGCTGGAC GTCGGTTCGA
                                          ADH T
2201     AATTCCGGGC GAATTTCTTA TGATTTATGA TTTTTATTAT TAAATAAGTT
         TTAAGGCCCG CTTAAAGAAT ACTAAATACT AAAAATAATA ATTTATTCAA
                                                  ADH T
2251     ATAAAAAAAA TAAGTGTATA CAAATTTTAA AGTGACTCTT AGGTTTTAAA
         TATTTTTTTT ATTCACATAT GTTTAAAATT TCACTGAGAA TCCAAAATTT
                                                  ADH T
2301     ACGAAAATTC TTGTTCTTGA GTAACTCTTT CCTGTAGGTC AGGTTGCTTT
         TGCTTTTAAG AACAAGAACT CATTGAGAAA GGACATCCAG TCCAACGAAA
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                                   ADH T
2351  CTCAGGTATA GCATGAGGTC GCTCTTATTG ACCACACCTC TACCGGCATG
      GAGTCCATAT CGTACTCCAG CGAGAATAAC TGGTGTGGAG ATGGCCGTAC
                                   ADH T
2401  CCGAGCAAAT GCCTGCAAAT CGCTCCCCAT TTCACCCAAT TGTAGATATG
      GGCTCGTTTA CGGACGTTTA GCGAGGGGTA AAGTGGGTTA ACATCTATAC
                                   ADH T
2451  CTAACTCCAG CAATGAGTTG ATGAATCTCG GTGTGTATTT TATGTCCTCA
      GATTGAGGTC GTTACTCAAC TACTTAGAGC CACACATAAA ATACAGGAGT
                              ADH T
2501  GAGGACAACA CCTGTTGTAA TCGTTCTTCC ACACGGATCG ATCCACAGGA
      CTCCTGTTGT GGACAACATT AGCAAGAAGG TGTGCCTAGC TAGGTGTCCT
2551  CGGGTGTGGT CGCCATGATC GCGTAGTCGA TAGTGGCTCC AAGTAGCGAA
      GCCCACACCA GCGGTACTAG CGCATCAGCT ATCACCGAGG TTCATCGCTT
2601  GCGAGCAGGA CTGGGCGGCG GCCAAAGCGG TCGGACAGTG CTCCGAGAAC
      CGCTCGTCCT GACCCGCCGC CGGTTTCGCC AGCCTGTCAC GAGGCTCTTG
2651  GGGTGCGCAT AGAAATTGCA TCAACGCATA TAGCGCTAGC AGCACGCCAT
      CCCACGCGTA TCTTTAACGT AGTTGCGTAT ATCGCGATCG TCGTGCGGTA
2701  AGTGACTGGC GATGCTGTCG GAATGGACGA TATCCCGCAA GAGGCCCGGC
      TCACTGACCG CTACGACAGC CTTACCTGCT ATAGGGCGTT CTCCGGGCCG
2751  AGTACCGGCA TAACCAAGCC TATGCCTACA GCATCCAGGG TGACGGTGCC
      TCATGGCCGT ATTGGTTCGG ATACGGATGT CGTAGGTCCC ACTGCCACGG
2801  GAGGATGACG ATGAGCGCAT TGTTAGATTT CATACACGGT GCCTGACTGC
      CTCCTACTGC TACTCGCGTA ACAATCTAAA GTATGTGCCA CGGACTGACG
                                                 2 µm origin
2851  GTTAGCAATT TAACTGTGAT AAACTACCGC ATTAAAGCTA GCTTTGAAGA
      CAATCGTTAA ATTGACACTA TTTGATGGCG TAATTTCGAT CGAAACTTCT
                              2 µm origin
2901  AAAATGCGCC TTATTCAATC TTTGCTATAA AAAATGGCCC AAAATCTCAC
      TTTTACGCGG AATAAGTTAG AAACGATATT TTTTACCGGG TTTTAGAGTG
                              2 µm origin
2951  ATTGGAAGAC ATTTGATGAC CTCATTTCTT TCAATGAAGG GCCTAACGGA
      TAACCTTCTG TAAACTACTG GAGTAAAGAA AGTTACTTCC CGGATTGCCT
                              2 µm origin
3001  GTTGACTAAT GTTGTGGGAA ATTGGAGCGA TAAGCGTGCT TCTGCCGTGG
      CAACTGATTA CAACACCCTT TAACCTCGCT ATTCGCACGA AGACGGCACC
                              2 µm origin
3051  CCAGGACAAC GTATACTCAT CAGATAACAG CAATACCTGA TCACTACTTC
      GGTCCTGTTG CATATGAGTA GTCTATTGTC GTTATGGACT AGTGATGAAG
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2 μm origin

3101 GCACTAGTTT CTCGGTACTA TGCATATGAT CCAATATCAA AGGAAATGAT
CGTGATCAAA GAGCCATGAT ACGTATACTA GGTTATAGTT TCCTTTACTA

2 μm origin

3151 AGCATTGAAG GATGAGACTA ATCCAATTGA GGAGTGGCAG CATATAGAAC
TCGTAACTTC CTACTCTGAT TAGGTTAACT CCTCACCGTC GTATATCTTG

2 μm origin

3201 AGCTAAAGGG TAGTGCTGAA GGAAGCATAC GATACCCCGC ATGGAATGGG
TCGATTTCCC ATCACGACTT CCTTCGTATG CTATGGGGCG TACCTTACCC

2 μm origin

3251 ATAATATCAC AGGAGGTACT AGACTACCTT TCATCCTACA TAAATAGACG
TATTATAGTG TCCTCCATGA TCTGATGGAA AGTAGGATGT ATTTATCTGC

2 μm origin

3301 CATATAAGTA CGCATTTAAG CATAAACACG CACTATGCCG TTCTTCTCAT
GTATATTCAT GCGTAAATTC GTATTTGTGC GTGATACGGC AAGAAGAGTA

2 μm origin

3351 GTATATATAT ATACAGGCAA CACGCAGATA TAGGTGCGAC GTGAACAGTG
CATATATATA TATGTCCGTT GTGCGTCTAT ATCCACGCTG CACTTGTCAC

2 μm origin

3401 AGCTGTATGT GCGCAGCTCG CGTTGCATTT TCGGAAGCGC TCGTTTTCGG
TCGACATACA CGCGTCGAGC GCAACGTAAA AGCCTTCGCG AGCAAAAGCC

2 μm origin

3451 AAACGCTTTG AAGTTCCTAT TCCGAAGTTC CTATTCTCTA GAAAGTATAG
TTTGCGAAAC TTCAAGGATA AGGCTTCAAG GATAAGAGAT CTTTCATATC

2 μm origin

3501 GAACTTCAGA GCGCTTTTGA AAACCAAAAG CGCTCTGAAG ACGCACTTTC
CTTGAAGTCT CGCGAAAACT TTTGGTTTTC GCGAGACTTC TGCGTGAAAG

2 μm origin

3551 AAAAAACCAA AAACGCACCG GACTGTAACG AGCTACTAAA ATATTGCGAA
TTTTTTGGTT TTTGCGTGGC CTGACATTGC TCGATGATTT TATAACGCTT

2 μm origin

3601 TACCGCTTCC ACAAACATTG CTCAAAAGTA TCTCTTTGCT ATATATCTCT
ATGGCGAAGG TGTTTGTAAC GAGTTTTCAT AGAGAAACGA TATATAGAGA

2 μm origin

3651 GTGCTATATC CCTATATAAC CTACCCATCC ACCTTTCGCT CCTTGAACTT
CACGATATAG GGATATATTG GATGGGTAGG TGGAAAGCGA GGAACTTGAA

2 μm origin

3701 GCATCTAAAC TCGACCTCTA CATTTTTTAT GTTTATCTCT AGTATTACTC
CGTAGATTTG AGCTGGAGAT GTAAAAAATA CAAATAGAGA TCATAATGAG

2 μm origin

3751 TTTAGACAAA AAAATTGTAG TAAGAACTAT TCATAGAGTG AATCGAAAAC
AAATCTGTTT TTTTAACATC ATTCTTGATA AGTATCTCAC TTAGCTTTTG

2 μm origin

3801 AATACGAAAA TGTAAACATT TCCTATACGT AGTATATAGA GACAAAATAG
TTATGCTTTT ACATTTGTAA AGGATATGCA TCATATATCT CTGTTTTATC

2 μm origin

3851 AAGAAACCGT TCATAATTTT CTGACCAATG AAGAATCATC AACGCTATCA
TTCTTTGGCA AGTATTAAAA GACTGGTTAC TTCTTAGTAG TTGCGATAGT

2 μm origin

3901 CTTTCTGTTC ACAAAGTATG CGCAATCCAC ATCGGTATAG AATATAATCG
GAAAGACAAG TGTTTCATAC GCGTTAGGTG TAGCCATATC TTATATTAGC

2 μm origin

3951 GGGATGCCTT TATCTTGAAA AAATGCACCC GCAGCTTCGC TAGTAATCAG
CCCTACGGAA ATAGAACTTT TTTACGTGGG CGTCGAAGCG ATCATTAGTC

2 μm origin

4001 TAAACGCGGG AAGTGGAGTC AGGCTTTTTT TATGGAAGAG AAAATAGACA
ATTTGCGCCC TTCACCTCAG TCCGAAAAAA ATACCTTCTC TTTTATCTGT

2 μm origin

4051 CCAAAGTAGC CTTCTTCTAA CCTTAACGGA CCTACAGTGC AAAAAGTTAT
GGTTTCATCG GAAGAAGATT GGAATTGCCT GGATGTCACG TTTTTCAATA

2 μm origin

4101 CAAGAGACTG CATTATAGAG CGCACAAAGG AGAAAAAAAG TAATCTAAGA
GTTCTCTGAC GTAATATCTC GCGTGTTTCC TCTTTTTTTC ATTAGATTCT

2 μm origin

4151 TGCTTTGTTA GAAAAATAGC GCTCTCGGGA TGCATTTTTG TAGAACAAAA
ACGAAACAAT CTTTTTATCG CGAGAGCCCT ACGTAAAAAC ATCTTGTTTT

2 μm origin

4201 AAGAAGTATA GATTCTTTGT TGGTAAAATA GCGCTCTCGC GTTGCATTTC
TTCTTCATAT CTAAGAAACA ACCATTTTAT CGCGAGAGCG CAACGTAAAG

2 μm origin

4251 TGTTCTGTAA AAATGCAGCT CAGATTCTTT GTTTGAAAAA TTAGCGCTCT
ACAAGACATT TTTACGTCGA GTCTAAGAAA CAAACTTTTT AATCGCGAGA

2 μm origin

4301 CGCGTTGCAT TTTTGTTTTA CAAAAATGAA GCACAGATTC TTCGTTGGTA
GCGCAACGTA AAAACAAAAT GTTTTTACTT CGTGTCTAAG AAGCAACCAT

2 μm origin

4351 AAATAGCGCT TTCGCGTTGC ATTTCTGTTC TGTAAAAATG CAGCTCAGAT
TTTATCGCGA AAGCGCAACG TAAAGACAAG ACATTTTTAC GTCGAGTCTA

2 μm origin

4401 TCTTTGTTTG AAAAATTAGC GCTCTCGCGT TGCATTTTTG TTCTACAAAA
AGAAACAAAC TTTTTAATCG CGAGAGCGCA ACGTAAAAAC AAGATGTTTT

2 μm origin

4451 TGAAGCACAG ATGCTTCGTT AACAAAGATA TGCTATTGAA GTGCAAGATG
ACTTCGTGTC TACGAAGCAA TTGTTTCTAT ACGATAACTT CACGTTCTAC

2 μm origin

4501 GAAACGCAGA AAATGAACCG GGGATGCGAC GTGCAAGATT ACCTATGCAA
CTTTGCGTCT TTTACTTGGC CCCTACGCTG CACGTTCTAA TGGATACGTT

2 μm origin

4551 TAGATGCAAT AGTTTCTCCA GGAACCGAAA TACATACATT GTCTTCCGTA
ATCTACGTTA TCAAAGAGGT CCTTGGCTTT ATGTATGTAA CAGAAGGCAT

2 μm origin

4601 AAGCGCTAGA CTATATATTA TTATACAGGT TCAAATATAC TATCTGTTTC
TTCGCGATCT GATATATAAT AATATGTCCA AGTTTATATG ATAGACAAAG

2 μm origin

4651 AGGGAAAACT CCCAGGTTCG GATGTTCAAA ATTCAATGAT GGGTAACAAG
TCCCTTTTGA GGGTCCAAGC CTACAAGTTT TAAGTTACTA CCCATTGTTC

2 μm origin

4701 TACGATCGTA AATCTGTAAA ACAGTTTGTC GGATATTAGG CTGTATCTCC
ATGCTAGCAT TTAGACATTT TGTCAAACAG CCTATAATCC GACATAGAGG

2 μm origin

4751 TCAAAGCGTA TTCGAATATC ATTGAGAAGC TGCAGCAGGC GTGAAGTTAG
AGTTTCGCAT AAGCTTATAG TAACTCTTCG ACGTCGTCCG CACTTCAATC

4801 ACGACAACTT CTCTCTGGAA ACGCATACCG ATATTCAGGC TGCTGCAAAG
TGCTGTTGAA GAGAGACCTT TGCGTATGGC TATAAGTCCG ACGACGTTTC

4851 GCACAGGCTA GTGCCCGTGC GAGTGCATCC GGTACCACCC CAGATGCTGT
CGTGTCCGAT CACGGGCACG CTCACGTAGG CCATGGTGGG GTCTACGACA

4901 AGTAGCTTCT GGTAGCACTG CAATGAGCCA TGCTTATCAA GAAAACACAG
TCATCGAAGA CCATCGTGAC GTTACTCGGT ACGAATAGTT CTTTTGTGTC

4951 GTTTTGGTAC TCGTCCCATA TATCTTGACA TGCAAGCCAC TACACCAACA
CAAAACCATG AGCAGGGTAT ATAGAACTGT ACGTTCGGTG ATGTGGTTGT

5001 GACCCTAGGG TTTTGGATAC GATGTTGAAG TTTTATACGG GACTTTATGG
CTGGGATCCC AAAACCTATG CTACAACTTC AAAATATGCC CTGAAATACC

5051 TAATCCTCAT TCCAACACTC ACTCTTACGG TTGGGAAACA AATACTGCTG
ATTAGGAGTA AGGTTGTGAG TGAGAATGCC AACCCTTTGT TTATGACGAC

5101 TGGAAAATGC TAGAGCTCAC GTAGCAAAGA TGATCAATGC CGACCCCAAG
ACCTTTTACG ATCTCGAGTG CATCGTTTCT ACTAGTTACG GCTGGGGTTC

5151 GAAATAATAT TCACTTCGGG AGCGACCGAA TCTAATAATA TGGTTCTTAA
CTTTATTATA AGTGAAGCCC TCGCTGGCTT AGATTATTAT ACCAAGAATT

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5201  GGGTGTCCCA AGATTTTATA AGAAGACTAA GAAACACATC ATCACCACTA
      CCCACAGGGT TCTAAAATAT TCTTCTGATT CTTTGTGTAG TAGTGGTGAT
5251  GAACGGAACA CAAGTGTGTC TTGGAAGCCG CACGGGCCAT GATGAAGGAG
      CTTGCCTTGT GTTCACACAG AACCTTCGGC GTGCCCGGTA CTACTTCCTC
5301  GGATTTGAAG TCACTTTCCT AAATGTGGAC GATCAAGGTC TTATCGATTT
      CCTAAACTTC AGTGAAAGGA TTTACACCTG CTAGTTCCAG AATAGCTAAA
5351  GAAGGAATTG GAAGATGCCA TTAGACCAGA TACCTGTCTC GTCTCTGTGA
      CTTCCTTAAC CTTCTACGGT AATCTGGTCT ATGGACAGAG CAGAGACACT
5401  TGGCTGTCAA TAATGAAATC GGTGTCATTC AACCTATTAA AGAAATTGGA
      ACCGACAGTT ATTACTTTAG CCACAGTAAG TTGGATAATT TCTTTAACCT
5451  GCAATTTGTA GAAAGAATAA GATCCTCGGG GACACCAAAT ATGGCGATCT
      CGTTAAACAT CTTTCTTATT CTAGGAGCCC CTGTGGTTTA TACCGCTAGA
5501  CGGCCTTTTC GTTTCTTGGA GCTGGGACAT GTTTGCCATC GATCCATCTA
      GCCGGAAAAG CAAAGAACCT CGACCCTGTA CAAACGGTAG CTAGGTAGAT
5551  CCACCAGAAC GGCCGTTAGA TCTGCTGCCA CCGTTGTTTC CACCGAAGAA
      GGTGGTCTTG CCGGCAATCT AGACGACGGT GGCAACAAAG GTGGCTTCTT
5601  ACCACCGTTG CCGTAACCAC CACGACGGTT GTTGCTAAAG AAGCTGCCAC
      TGGTGGCAAC GGCATTGGTG GTGCTGCCAA CAACGATTTC TTCGACGGTG
5651  CGCCACGGCC ACCGTTGTAG CCGCCGTTGT TGTTATTGTA GTTGCTACTG
      GCGGTGCCGG TGGCAACATC GGCGGCAACA ACAATAACAT CAACGATGAC
5701  TTATTTCTGG CACTTCTTGG TTTTCCTCTT AAGTGAGGAG GAACATAACC
      AATAAAGACC GTGAAGAACC AAAAGGAGAA TTCACTCCTC CTTGTATTGG
5751  ATTCTCGTTG TTGTCGTTGA TGCTTAAATT TTGCACTTGT TCGCTCAGTT
      TAAGAGCAAC AACAGCAACT ACGAATTTAA AACGTGAACA AGCGAGTCAA
5801  CAGCCATAAT ATGAAATGCT TTTCTTGTTG TTCTTACGGA ATACCACTTG
      GTCGGTATTA TACTTTACGA AAAGAACAAC AAGAATGCCT TATGGTGAAC
5851  CCACCTATCA CCACAACTAA CTTTTTCCCG TTCCTCCATC TCTTTTATAT
      GGTGGATAGT GGTGTTGATT GAAAAAGGGC AAGGAGGTAG AGAAAATATA
5901  TTTTTTTCTC GATCGAGTTC AAGAGAAAAA AAAAGAAAAA GCAAAAAGAA
      AAAAAAAGAG CTAGCTCAAG TTCTCTTTTT TTTTCTTTTT CGTTTTTCTT
5951  AAAAGGAAAG CGCGCCTCGT TCAGAATGAC ACGTATAGAA TGATGCATTA
      TTTTCCTTTC GCGCGGAGCA AGTCTTACTG TGCATATCTT ACTACGTAAT
6001  CCTTGTCATC TTCAGTATCA TACTGTTCGT ATACATACTT ACTGACATTC
      GGAACAGTAG AAGTCATAGT ATGACAAGCA TATGTATGAA TGACTGTAAG
6051  ATAGGTATAC ATATATACAC ATGTATATAT ATCGTATGCT GCAGCTTTAA
      TATCCATATG TATATATGTG TACATATATA TAGCATACGA CGTCGAAATT
6101  ATAATCGGTG TCACTACATA AGAACACCTT TGGTGGAGGG AACATCGTTG
      TATTAGCCAC AGTGATGTAT TCTTGTGGAA ACCACCTCCC TTGTAGCAAC
                                   HIS3
6151  GTACCATTGG GCGAGGTGGC TTCTCTTATG GCAACCGCAA GAGCCTTGAA
      CATGGTAACC CGCTCCACCG AAGAGAATAC CGTTGGCGTT CTCGGAACTT
                                HIS3
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6201  CGCACTCTCA CTACGGTGAT GATCATTCTT GCCTCGCAGA CAATCAACGT
      GCGTGAGAGT GATGCCACTA CTAGTAAGAA CGGAGCGTCT GTTAGTTGCA
                                   HIS3
                                         HindIII
6251  GGAGGGTAAT TCTGCTAGCC TCTGCAAAGC TTTCAAGAAA ATGCGGGATC
      CCTCCCATTA AGACGATCGG AGACGTTTCG AAAGTTCTTT TACGCCCTAG
                                   HIS3
6301  ATCTCGCAAG AGAGATCTCC TACTTTCTCC CTTTGCAAAC CAAGTTCGAC
      TAGAGCGTTC TCTCTAGAGG ATGAAAGAGG GAAACGTTTG GTTCAAGCTG
                                   HIS3
6351  AACTGCGTAC GGCCTGTTCG AAAGATCTAC CACCGCTCTG GAAAGTGCCT
      TTGACGCATG CCGGACAAGC TTTCTAGATG GTGGCGAGAC CTTTCACGGA
                                   HIS3
6401  CATCCAAAGG CGCAAATCCT GATCCAAACC TTTTTACTCC ACGCGCCAGT
      GTAGGTTTCC GCGTTTAGGA CTAGGTTTGG AAAAATGAGG TGCGCGGTCA
                                   HIS3
                        HindIII
6451  AGGGCCTCTT TAAAAGCTTG ACCGAGAGCA ATCCCGCAGT CTTCAGTGGT
      TCCCGGAGAA ATTTTCGAAC TGGCTCTCGT TAGGGCGTCA GAAGTCACCA
                                   HIS3
6501  GTGATGGTCG TCTATGTGTA AGTCACCAAT GCACTCAACG ATTAGCGACC
      CACTACCAGC AGATACACAT TCAGTGGTTA CGTGAGTTGC TAATCGCTGG
                                   HIS3
6551  AGCCGGAATG CTTGGCCAGA GCATGTATCA TATGGTCCAG AAACCCTATA
      TCGGCCTTAC GAACCGGTCT CGTACATAGT ATACCAGGTC TTTGGGATAT
                                   HIS3
6601  CCTGTGTGGA CGTTAATCAC TTGCGATTGT GTGGCCTGTT CTGCTACTGC
      GGACACACCT GCAATTAGTG AACGCTAACA CACCGGACAA GACGATGACG
                                   HIS3
6651  TTCTGCCTCT TTTTCTGGGA AGATCGAGTG CTCTATCGCT AGGGGACCAC
      AAGACGGAGA AAAAGACCCT TCTAGCTCAC GAGATAGCGA TCCCCTGGTG
                                   HIS3
6701  CCTTTAAAGA GATCGCAATC TGAATCTTGG TTTCATTTGT AATACGCTTT
      GGAAATTTCT CTAGCGTTAG ACTTAGAACC AAAGTAAACA TTATGCGAAA
                                   HIS3
6751  ACTAGGGCTT TCTGCTCTGT CATCTTTGCC TTCGTTTATC TTGCCTGCTC
      TGATCCCGAA AGACGAGACA GTAGAAACGG AAGCAAATAG AACGGACGAG
                     HIS3
6801  ATTTTTTAGT ATATTCTTCG AAGAAATCAC ATTACTTTAT ATAATGTATA
      TAAAAAATCA TATAAGAAGC TTCTTTAGTG TAATGAAATA TATTACATAT
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6851  ATTCATTATG TGATAATGCC AATCGCTAAG AAAAAAAAAG AGTCATCCGC
      TAAGTAATAC ACTATTACGG TTAGCGATTC TTTTTTTTTC TCAGTAGGCG
6901  TAGGTGGAAA AAAAAAAATG AAAATCATTA CCGAGGCATA AAAAAATATA
      ATCCACCTTT TTTTTTTTAC TTTTAGTAAT GGCTCCGTAT TTTTTTATAT
6951  GAGTGTACTA GAGGAGGCCA AGAGTAATAG AAAAAGAAAA TTGCGGGAAA
      CTCACATGAT CTCCTCCGGT TCTCATTATC TTTTTCTTTT AACGCCCTTT
7001  GGACTGTGTT ATGACTTCCC TGACTAATGC CGTGTTCAAA CGATACCTGG
      CCTGACACAA TACTGAAGGG ACTGATTACG GCACAAGTTT GCTATGGACC
7051  CAGTGACTCC TAGCGCTCAC CAAGCTCTTA AAACGAGAAT TAAGAAAAAG
      GTCACTGAGG ATCGCGAGTG GTTCGAGAAT TTTGCTCTTA ATTCTTTTTC
7101  TCGTCATCTT TCGATAAGTT TTTCCCACAG CAAAGCAATA GTAGAAAAAC
      AGCAGTAGAA AGCTATTCAA AAAGGGTGTC GTTTCGTTAT CATCTTTTTG
7151  AATGGGAAAC GTTGAATGAA GACAAAGCGT CGTGGTTTAA AAGGAAATAC
      TTACCCTTTG CAACTTACTT CTGTTTCGCA GCACCAAATT TTCCTTTATG
7201  GCTCACGTAC ATGCTAGGGA ACAGGACCGT GCAGCGGATC TAATGAATCC
      CGAGTGCATG TACGATCCCT TGTCCTGGCA CGTCGCCTAG ATTACTTAGG
7251  ATTTGTTAGT TAATAGTTTA AATGTTTTTA TCGGAAGAGG TTTTGTCATC
      TAAACAATCA ATTATCAAAT TTACAAAAAT AGCCTTCTCC AAAACAGTAG
7301  ACATCAGCAA TGTTCTTCTT GGTCTCGATG TAGTATACGT ATAAATTATT
      TGTAGTCGTT ACAAGAAGAA CCAGAGCTAC ATCATATGCA TATTTAATAA
7351  ACCTGATACT TCATCTCTAA GTCTCATTGC CTTTGTGCCA AAAAATCTGT
      TGGACTATGA AGTAGAGATT CAGAGTAACG GAAACACGGT TTTTTAGACA
7401  TTCTAAATTT CTCTTCATTT GTAGACTTAA TTATACTGAT CGTTGATCTA
      AAGATTTAAA GAGAAGTAAA CATCTGAATT AATATGACTA GCAACTAGAT
7451  CTATCAGTAA GTAAGCCTTT AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA
      GATAGTCATT CATTCGGAAA TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT
7501  ACCTGTAACA ATAGCAATAC CCCAAATACC TAATGTAGTT CCAGCAAGCA
      TGGACATTGT TATCGTTATG GGGTTTATGG ATTACATCAA GGTCGTTCGT
7551  AGCTAAAAAG TAAAGCAACA ACATAACTCA CCCCTGCATC TGCAGCTTTT
      TCGATTTTTC ATTTCGTTGT TGTATTGAGT GGGGACGTAG ACGTCGAAAA
7601  GCCCGGGCAG CCTGCTCTGC CTGTGTTTTC TTTAATTGAG CAGTAGACCA
      CGGGCCCGTC GGACGAGACG GACACAAAAG AAATTAACTC GTCATCTGGT
7651  TTTAGCAGTT GCATGAATAG CTGCAGCGTC ACATCGGATA ATAATGATGG
      AAATCGTCAA CGTACTTATC GACGTCGCAG TGTAGCCTAT TATTACTACC
7701  CAGCCATTGT AGAAGTGCCT TTTGCATTTC TAGTCTCTTT CTCGGTCTAG
      GTCGGTAACA TCTTCACGGA AAACGTAAAG ATCAGAGAAA GAGCCAGATC
7751  CTAGTTTTAC TACATCGCGA AGATAGAATC TTAGATCACA CTGCCTTTGC
      GATCAAAATG ATGTAGCGCT TCTATCTTAG AATCTAGTGT GACGGAAACG
7801  TGAGCTGGAT CAATAGAGTA ACAAAAGAGT GGTAAGGCCT CGTTAAAGGA
      ACTCGACCTA GTTATCTCAT TGTTTTCTCA CCATTCCGGA GCAATTTCCT
7851  CAAGGACCTG AGCGGAAGTG TATCGTACAG TAGACGGAGT ATACTAGTAT
      GTTCCTGGAC TCGCCTTCAC ATAGCATGTC ATCTGCCTCA TATGATCATA
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7901  AGTCTATAGT CCGTGGAATT AATTCTTGAA GACGAAAGGG CCTCGTGATA
      TCAGATATCA GGCACCTTAA TTAAGAACTT CTGCTTTCCC GGAGCACTAT

7951  CGCCTATTTT TATAGGTTAA TGTCATGATA ATAATGGTTT CTTAGACGTC
      GCGGATAAAA ATATCCAATT ACAGTACTAT TATTACCAAA GAATCTGCAG

8001  AGGTGGCACT TTTCGGGGAA ATGTGCGCGG AACCCCTATT TGTTTATTTT
      TCCACCGTGA AAAGCCCCTT TACACGCGCC TTGGGGATAA ACAAATAAAA

8051  TCTAAATACA TTCAAATATG TATCCGCTCA TGAGACAATA ACCCTGATAA
      AGATTTATGT AAGTTTATAC ATAGGCGAGT ACTCTGTTAT TGGGACTATT

                                                ampR
8101  ATGCTTCAAT AATATTGAAA AAGGAAGAGT ATGAGTATTC AACATTTCCG
      TACGAAGTTA TTATAACTTT TTCCTTCTCA TACTCATAAG TTGTAAAGGC

                                ampR
8151  TGTCGCCCTT ATTCCCTTTT TTGCGGCATT TTGCCTTCCT GTTTTTGCTC
      ACAGCGGGAA TAAGGGAAAA AACGCCGTAA AACGGAAGGA CAAAAACGAG

                                ampR
8201  ACCCAGAAAC GCTGGTGAAA GTAAAAGATG CTGAAGATCA GTTGGGTGCA
      TGGGTCTTTG CGACCACTTT CATTTTCTAC GACTTCTAGT CAACCCACGT

                                ampR
8251  CGAGTGGGTT ACATCGAACT GGATCTCAAC AGCGGTAAGA TCCTTGAGAG
      GCTCACCCAA TGTAGCTTGA CCTAGAGTTG TCGCCATTCT AGGAACTCTC

                                ampR
8301  TTTTCGCCCC GAAGAACGTT TTCCAATGAT GAGCACTTTT AAAGTTCTGC
      AAAAGCGGGG CTTCTTGCAA AAGGTTACTA CTCGTGAAAA TTTCAAGACG

                                ampR
8351  TATGTGGCGC GGTATTATCC CGTGTTGACG CCGGGCAAGA GCAACTCGGT
      ATACACCGCG CCATAATAGG GCACAACTGC GGCCCGTTCT CGTTGAGCCA

                                ampR
8401  CGCCGCATAC ACTATTCTCA GAATGACTTG GTTGAGTACT CACCAGTCAC
      GCGGCGTATG TGATAAGAGT CTTACTGAAC CAACTCATGA GTGGTCAGTG

                                ampR
8451  AGAAAAGCAT CTTACGGATG GCATGACAGT AAGAGAATTA TGCAGTGCTG
      TCTTTTCGTA GAATGCCTAC CGTACTGTCA TTCTCTTAAT ACGTCACGAC

                                ampR
8501  CCATAACCAT GAGTGATAAC ACTGCGGCCA ACTTACTTCT GACAACGATC
      GGTATTGGTA CTCACTATTG TGACGCCGGT TGAATGAAGA CTGTTGCTAG

                                ampR
8551  GGAGGACCGA AGGAGCTAAC CGCTTTTTTG CACAACATGG GGGATCATGT
      CCTCCTGGCT TCCTCGATTG GCGAAAAAAC GTGTTGTACC CCCTAGTACA

                                ampR
8601  AACTCGCCTT GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAACG
      TTGAGCGGAA CTAGCAACCC TTGGCCTCGA CTTACTTCGG TATGGTTTGC
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                                        ampR
8651  ACGAGCGTGA CACCACGATG CCTGCAGCAA TGGCAACAAC GTTGCGCAAA
      TGCTCGCACT GTGGTGCTAC GGACGTCGTT ACCGTTGTTG CAACGCGTTT
                                        ampR
8701  CTATTAACTG GCGAACTACT TACTCTAGCT TCCCGGCAAC AATTAATAGA
      GATAATTGAC CGCTTGATGA ATGAGATCGA AGGGCCGTTG TTAATTATCT
                                        ampR
8751  CTGGATGGAG GCGGATAAAG TTGCAGGACC ACTTCTGCGC TCGGCCCTTC
      GACCTACCTC CGCCTATTTC AACGTCCTGG TGAAGACGCG AGCCGGGAAG
                                        ampR
8801  CGGCTGGCTG GTTTATTGCT GATAAATCTG GAGCCGGTGA GCGTGGGTCT
      GCCGACCGAC CAAATAACGA CTATTTAGAC CTCGGCCACT CGCACCCAGA
                                        ampR
8851  CGCGGTATCA TTGCAGCACT GGGGCCAGAT GGTAAGCCCT CCCGTATCGT
      GCGCCATAGT AACGTCGTGA CCCCGGTCTA CCATTCGGGA GGGCATAGCA
                                        ampR
8901  AGTTATCTAC ACGACGGGGA GTCAGGCAAC TATGGATGAA CGAAATAGAC
      TCAATAGATG TGCTGCCCCT CAGTCCGTTG ATACCTACTT GCTTTATCTG
                                        ampR
8951  AGATCGCTGA GATAGGTGCC TCACTGATTA AGCATTGGTA ACTGTCAGAC
      TCTAGCGACT CTATCCACGG AGTGACTAAT TCGTAACCAT TGACAGTCTG
                                        pBr ori
9001  CAAGTTTACT CATATATACT TTAGATTGAT TTAAAACTTC ATTTTTAATT
      GTTCAAATGA GTATATATGA AATCTAACTA AATTTTGAAG TAAAAATTAA
                                        pBr ori
9051  TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAAATCC
      ATTTTCCTAG ATCCACTTCT AGGAAAAACT ATTAGAGTAC TGGTTTTAGG
                                        pBr ori
9101  CTTAACGTGA GTTTTCGTTC CACTGAGCGT CAGACCCCGT AGAAAAGATC
      GAATTGCACT CAAAAGCAAG GTGACTCGCA GTCTGGGGCA TCTTTTCTAG
                                        pBr ori
9151  AAAGGATCTT CTTGAGATCC TTTTTTTCTG CGCGTAATCT GCTGCTTGCA
      TTTCCTAGAA GAACTCTAGG AAAAAAAGAC GCGCATTAGA CGACGAACGT
                                        pBr ori
9201  AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGCCG GATCAAGAGC
      TTGTTTTTTT GGTGGCGATG GTCGCCACCA AACAAACGGC CTAGTTCTCG
                                        pBr ori
9251  TACCAACTCT TTTTCCGAAG GTAACTGGCT TCAGCAGAGC GCAGATACCA
      ATGGTTGAGA AAAAGGCTTC CATTGACCGA AGTCGTCTCG CGTCTATGGT
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pBr ori

9301 AATACTGTCC TTCTAGTGTA GCCGTAGTTA GGCCACCACT TCAAGAACTC
TTATGACAGG AAGATCACAT CGGCATCAAT CCGGTGGTGA AGTTCTTGAG

pBr ori

9351 TGTAGCACCG CCTACATACC TCGCTCTGCT AATCCTGTTA CCAGTGGCTG
ACATCGTGGC GGATGTATGG AGCGAGACGA TTAGGACAAT GGTCACCGAC

pBr ori

9401 CTGCCAGTGG CGATAAGTCG TGTCTTACCG GGTTGGACTC AAGACGATAG
GACGGTCACC GCTATTCAGC ACAGAATGGC CCAACCTGAG TTCTGCTATC

pBr ori

9451 TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGCACACA
AATGGCCTAT TCCGCGTCGC CAGCCCGACT TGCCCCCCAA GCACGTGTGT

pBr ori

9501 GCCCAGCTTG GAGCGAACGA CCTACACCGA ACTGAGATAC CTACAGCGTG
CGGGTCGAAC CTCGCTTGCT GGATGTGGCT TGACTCTATG GATGTCGCAC

pBr ori

9551 AGCTATGAGA AAGCGCCACG CTTCCCGAAG GGAGAAAGGC GGACAGGTAT
TCGATACTCT TTCGCGGTGC GAAGGGCTTC CCTCTTTCCG CCTGTCCATA

pBr ori

9601 CCGGTAAGCG GCAGGGTCGG AACAGGAGAG CGCACGAGGG AGCTTCCAGG
GGCCATTCGC CGTCCCAGCC TTGTCCTCTC GCGTGCTCCC TCGAAGGTCC

pBr ori

9651 GGGAAACGCC TGGTATCTTT ATAGTCCTGT CGGGTTTCGC CACCTCTGAC
CCCTTTGCGG ACCATAGAAA TATCAGGACA GCCCAAAGCG GTGGAGACTG

pBr ori

9701 TTGAGCGTCG ATTTTTGTGA TGCTCGTCAG GGGGGCGGAG CCTATGGAAA
AACTCGCAGC TAAAAACACT ACGAGCAGTC CCCCCGCCTC GGATACCTTT

pBr ori

9751 AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT
TTGCGGTCGT TGCGCCGGAA AAATGCCAAG GACCGGAAAA CGACCGGAAA

pBr ori

9801 TGCTCACATG TTCTTTCCTG CGTTATCCCC TGATTCTGTG GATAACCGTA
ACGAGTGTAC AAGAAAGGAC GCAATAGGGG ACTAAGACAC CTATTGGCAT

pBr ori

9851 TTACCGCCTT TGAGTGAGCT GATACCGCTC GCCGCAGCCG AACGACCGAG
AATGGCGGAA ACTCACTCGA CTATGGCGAG CGGCGTCGGC TTGCTGGCTC

pBr ori

9901 CGCAGCGAGT CAGTGAGCGA GGAAGCGGAA GAGCGCCTGA TGCGGTATTT
GCGTCGCTCA GTCACTCGCT CCTTCGCCTT CTCGCGGACT ACGCCATAAA

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                                   pBr ori
 9951  TCTCCTTACG CATCTGTGCG GTATTTCACA CCGCATATGG TGCACTCTCA
       AGAGGAATGC GTAGACACGC CATAAAGTGT GGCGTATACC ACGTGAGAGT
                                   pBr ori
10001  GTACAATCTG CTCTGATGCC GCATAGTTAA GCCAGTATAC ACTCCGCTAT
       CATGTTAGAC GAGACTACGG CGTATCAATT CGGTCATATG TGAGGCGATA
                                   pBr ori
10051  CGCTACGTGA CTGGGTCATG GCTGCGCCCC GACACCCGCC AACACCCGCT
       GCGATGCACT GACCCAGTAC CGACGCGGGG CTGTGGGCGG TTGTGGGCGA
                                   pBr ori
10101  GACGCGCCCT GACGGGCTTG TCTGCTCCCG GCATCCGCTT ACAGACAAGC
       CTGCGCGGGA CTGCCCGAAC AGACGAGGGC CGTAGGCGAA TGTCTGTTCG
                pBr ori
10151  TGTGACCGTC TCCGGG
       ACACTGGCAG AGGCCC
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