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                                XmaI
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                                SmaI
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    NotI      PvuIIHindIII      PstI  Sali  BamHI      PacI
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1  GAACGCGGCC  GCCAGCTGAA  GCTTCGTACG  CTGCAGGTCG  ACGGATCCCC  GGGTTAATTA  AGATGAAGCG  ACGATGGAAA  AAGAATTTCA  TAGCCGTCTC
   CTGCGCGGG  CGGTCGACTT  CGAAGCATGC  GACGTCCAGC  TGCCTAGGGG  CCCAATTAAT  TCTACTTCGC  TGCTACCTTT  TTCTTAAAGT  ATCGGCAGAG

                                KpnI
                                ~~~~~

101  AGCAGCCAAC  CGCTTTAAGA  AAATCTCATC  CTCCGGGGCA  CTTGATTATG  GTACCCCAAC  TACTGCTTCT  GAAAATCTAT  ATTTTCAAGG  TGAACTAAAA
    TCGTCGGTTG  GCGAAATTCT  TTTAGAGTAG  GAGGCCCCGT  GAACATAATC  CATGGGGTTG  ATGACGAAGA  CTTTTAGATA  TAAAAGTTCC  ACTTGATTTT

201  ACTGCTGCTT  TGGCTCAACA  TGCGATTAAA  GCTGATGCGC  AACAAAATAA  CTTCAACAAA  GATCAACAAA  GCGCCTTCTA  TGAAATCTTG  AACATGCCTA
    TGACGACGAA  ACCGAGTTGT  ACGCTAATTT  CGACTACGCG  TTGTTTTATT  GAAGTTGTTT  CTAGTTGTTT  CCGGGAAGAT  ACTTTAGAAC  TTGTACGGAT

301  ACTTAAACGA  AGCGCAACGT  AACGGCTTCA  TTCAAAGTCT  TAAAGACGAC  CCAAGCCAAA  GCACTAACGT  TTTAGGTGAA  GCTAAAAAAT  TAAACGAATC
    TGAATTTGCT  TCGCGTTGCA  TTGCCGAAGT  AAGTTTCAGA  ATTCTGCTG  GGTTCGGTTT  CGTGATTGCA  AAATCCACTT  CGATTTTTTA  ATTTGCTTAG

401  TCAAGCACCG  AAAGCTGATA  ACAATTTCAA  CAAAGAACAA  CAAAATGCTT  TCTATGAAAT  CTTGAATATG  CCTAACCTAA  ACGAAGAACA  ACGCAATGGT
    AGTTCGTGGC  TTTTCGACTAT  TGTTAAAGTT  GTTTCCTGTT  GTTTTACGAA  AGATACTTTA  GAACTTATAC  GGATTGAATT  TGCTTCTTGT  TGCCTTACCA

                                HindIII
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501  TTCATCCAAA  GCTTAAAAGA  TGACCCAAGC  CAAAGTGCTA  ACCTATTGTC  AGAAGCTAAA  AAGTTAAATG  AATCTCAAGC  ACCGAAAGCG  GATAACAAAT
    AAGTAGGTTT  CGAATTTTCT  ACTGGGTTCT  GTTTCACGAT  TGGATAACAG  TCTTCGATTT  TTCAATTTAC  TTAGAGTTCT  TGGCTTTCGC  CTATTGTTTA

                                AscI
                                ~~~~~

601  TCAACAAAGA  ATAAGGCGCG  CCACTTCTAA  ATAAGCGAAT  TTCTTATGAT  TTATGATTTT  TATTATTAAG  TAAGTTATAA  AAAAAATAAG  TGTATACAAA
    AGTTGTTTCT  TATTCCGCGC  GGTGAAGATT  TATTGCTTA  AAGAATACTA  AATACTAAAA  ATAATAATTT  ATTCAATATT  TTTTTTATTC  ACATATGTTT

701  TTTTAAAGTG  ACTCTTAGGT  TTTAAAACGA  AAATTCTTAT  TCTTGAGTAA  CTCTTTCCTG  TAGGTCAGGT  TGCTTTCTCA  GGTATAGTAT  GAGGTCGCTC
    AAAATTTTAC  TGAGAATCCA  AAATTTGCT  TTTAAGAATA  AGAACTCATT  GAGAAAGGAC  ATCCAGTCCA  ACGAAAGAGT  CCATATCATA  CTCCAGCGAG

                                BglII
                                ~~~~~

801  TTATTGACCA  CACCTCTACC  GGCAGATCCG  CTAGGGATAA  CAGGGTAATA  TAGATCTGTT  TAGCTTGCCCT  CGTCCCCGCC  GGGTCACCCG  GCCAGCGACA
    AATAACTGGT  GTGGAGATGG  CCGTCTAGGC  GATCCCTATT  GTCCATTAT  ATCTAGACAA  ATCGAACGGA  GCAGGGGCGG  CCCAGTGGGC  CGGTCGCTGT

901  TGGAGGCCCA  GAATACCCTC  CTTGACAGTC  TTGACGTGCG  CAGCTCAGGG  GCATGATGTG  ACTGTCGCC  GTACATTTAG  CCCATACATC  CCCATGTATA
    ACCTCCGGGT  CTTATGGGAG  GAACTGTCAG  AACTGCACGC  GTCGAGTCCC  CGTACTACAC  TGACAGCGGG  CATGTAAATC  GGGTATGTAG  GGGTACATAT

                                PstI
                                ~~~~~
                                MluI
                                ~~~

1001  ATCATTGCA  TCCATACATT  TTGATGGCCG  CACGGCGCGA  AGCAAAAATT  ACGGCTCCTC  GCTGCAGACC  TGCGAGCAGG  GAAACGCTCC  CCTCACAGAC
    TAGTAAACGT  AGGTATGTAA  AACTACCGGC  GTGCCGCGCT  TCGTTTTTAA  TGCCGAGGAG  CGACGCTGG  ACGCTCGTCC  CTTTGCGAGG  GGAGTGTCTG

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MluI

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1101 GCGTTGAATT GTCCCCACGC CGCGCCCCTG TAGAGAAATA TAAAAGGTTA GGATTTGCCA CTGAGGTTCT TCTTTCATAT ACTTCCTTTT AAAATCTTGC  
CGCAACTTAA CAGGGGTGCG GCGCGGGGAC ATCTCTTTAT ATTTTCCAAT CCTAAACGGT GACTCCAAGA AGAAAGTATA TGAAGGAAAA TTTTAGAACG

1201 TAGGATACAG TTCTCACATC ACATCCGAAC ATAAACAACC ATGGGTAAGG AAAAGACTCA CGTTTCGAGG CCGCGATTAA ATTCCAACAT GGATGCTGAT  
ATCCTATGTC AAGAGTGTAG TGTAGGCTTG TATTTGTTGG TACCCATTCC TTTTCTGAGT GCAAAGCTCC GCGGCTAATT TAAGGTTGTA CCTACGACTA

ClaI

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1301 TTATATGGGT ATAAATGGGC TCGCGATAAT GTCGGGCAAT CAGGTGCGAC AATCTATCGA TTGTATGGGA AGCCCGATGC GCCAGAGTTG TTTCTGAAAC
AATATACCCA TATTTACCCG AGCGCTATTA CAGCCCCTTA GTCCACGCTG TTAGATAGCT AACATACCCCT TCGGGCTACG CGGTCTCAAC AAAGACTTTG

1401 ATGGCAAAGG TAGCGTTGCC AATGATGTTA CAGATGAGAT GGTGAGACTA AACTGGCTGA CGGAATTTAT GCCTCTTCCG ACCATCAAGC ATTTTATCCG
TACCGTTTCC ATCGCAACGG TTACTIONAAT GTCTACTCTA CCAGTCTGAT TTGACCGACT GCCTTAAATA CGGAGAAGGC TGGTAGTTCC TAAAATAGGC

NsiI

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1501 TACTCCTGAT GATGCATGGT TACTCACCAC TCGCATCCCC GGCAAACAG CATTCCAGGT ATTAGAAGAA TATCCTGATT CAGGTGAAAA TATTGTTGAT  
ATGAGGACTA CTACGTACCA ATGAGTGGTG ACGCTAGGGG CCGTTTTTGT GTAAGGTCCA TAATCTTCTT ATAGGACTAA GTCCACTTTT ATAACAATA

PvuI

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1601 GCGCTGGCAG TGTTCCTGCG CCGGTTGCAT TCGATTCTCG TTTGTAATTG TCCTTTTAAAC AGCGATCGCG TATTTCTGCT CGCTCAGGCG CAATCAGGAA
CGCGACCGTC ACAAGGACGC GGCCAACGTA AGCTAAGGAC AAACATTAAC AGGAAAATTG TCGCTAGCGC ATAAAGCAGA GCGAGTCCGC GTTAGTGCTT

NsiI HindIII

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1701 TGAATAACGG TTTGGTTGAT GCGAGTGATT TTGATGACGA GCGTAATGGC TGGCCTGTTG AACAAAGTCTG GAAAGAAATG CATAAGCTTT TGCCATTCTC  
ACTTATTGCC AAACCAACTA CGCTCACTAA AACTACTGCT CGCATTACCG ACCGGACAAC TTGTTCAGAC CTTTCTTTTAC GTATTGCGAA ACGGTAAGAG

1801 ACCGGATTCA GTCGTCACCT ATGGTGATTT CTCACCTTGT AACCTTATTT TTGACGAGGG GAAATTAATA GGTGTGATTT ATGTTGGACG AGTCGGAATC  
TGGCCTAAGT CAGCAGTGAG TACCACTAAA GAGTGAACCTA TTGGAATAAA AACTGCTCCC CTTTAATTAT CCAACATAAC TACAACCTGC TCAGCCTTAG

1901 GCAGACCGAT ACCAGGATCT TGCCATCCTA TGGAACGACC TCGGTGAGTT TTCTCCTTCA TTACAGAAAC GGCTTTTTTCA AAAATATGGT ATTGATAATC  
CGTCTGGCTA TGGTCCTAGA ACGGTAGGAT ACCTTGACGG AGCCACTCAA AAGAGGAAGT AATGTCTTTG CCGAAAAAGT TTTTATACCA TAACTATTAG

ScaI

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2001 CTGATATGAA TAAATGCGAG TTTTCATTTGA TGCTCGATGA GTTTTTCTAA TCAGTACTGA CAATAAAAAG ATTCTTGTTT TCAAGAACTT GTCATTTGTA
GACTATACTT ATTTAACGTC AAAGTAAACT ACGAGCTACT CAAAAGATT AGTCATGACT GTTATTTTTT TAAGAACAAA AGTTCTTGAA CAGTAAACAT

2101 TAGTTTTTTTT ATATTGTAGT TGTTCTATTT TAATCAAATG TTAGCGTGAT TTATATTTTT TTTCGCCTCG ACATCATCTG CCCAGATGCG AAGTTAAGTG
ATCAAAAAA TATAACATCA ACAAGATAAA ATTAGTTTAC AATCGCACTA AATATAAAAA AAAGCGGAGC TGTAGTAGAC GGGTCTACGC TTCAATTCAC

SacI

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EcoRI

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2201 CGCAGAAAGT AATATCATGC GTCAATCGTA TGTGAATGCT GGTCGCTATA CTGCTGTCTGA TTCGATACTA ACGCCGCCAT CCAGTTTAAA CGAGCTCGAA

GCGTCTTTCA TTATAGTACG CAGTTAGCAT ACACTTACGA CCAGCGATAT GACGACAGCT AAGCTATGAT TGCGGCGGTA GGTCAAATTT GCTCGAGCTT

EcoRI

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SacII

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ClaI

EcoRV

SpeI

NotI

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|------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 2301 | TTCATCGATG<br>AAGTAGCTAC  | ATATCAGATC<br>TATAGTCTAG | CACTAGTGGC<br>GTGATCACCG | CTATGCGGCC<br>GATACGCCGG | GCGGATCTGC<br>CGCCTAGACG | CGGTCTCCCT<br>GCCAGAGGGA | ATAGTGAGTC<br>TATCACTCAG  | GTATTAATTT<br>CATAATTTAA  | CGATAAGCCA<br>GCTATTCGGT  | GGTTAACCTG<br>CCAATTGGAC  |
| 2401 | CATTAATGAA<br>GTAATTACTT  | TCGGCCAACG<br>AGCCGGTTGC | CGCGGGGAGA<br>GCGCCCCTCT | GGCGGTTTGC<br>CCGCCAAACG | GTATTGGGCG<br>CATAACCCGC | CTCTCCGCT<br>GAGAAGGCGA  | TCCTCGCTCA<br>AGGAGCGAGT  | CTGACTCGCT<br>GACTGAGCGA  | GCGCTCGGTC<br>CGCGAGCCAG  | GTTTCGGCTGC<br>CAAGCCGACG |
| 2501 | GGCGAGCGGT<br>CCGCTCGCCA  | ATCAGCTCAC<br>TAGTCGAGTG | TCAAAGGCGG<br>AGTTTCCGCC | TAATACGGTT<br>ATTATGCCAA | ATCCACAGAA<br>TAGGTGCTTT | TCAGGGGATA<br>AGTCCCCTAT | ACGCAGGAAA<br>TGCCTCTTTT  | GAACATGTGA<br>CTTGTACTACT | GCAAAAAGGCC<br>CGTTTTCCGG | AGCAAAAAGGC<br>TCGTTTTCCG |
| 2601 | CAGGAACCGT<br>GTCCTTGCCA  | AAAAAGGCCG<br>TTTTTCCGGC | CGTTGCTGGC<br>GCAACGACCG | GTTTTTCCAT<br>CAAAAAGGTA | AGGCTCCGCC<br>TCCGAGGCCG | CCCCTGACGA<br>GGGGACTGCT | GCATCACAAA<br>CGTAGTGTTT  | AATCGACGCT<br>TTAGCTGCCA  | CAAGTCAGAG<br>GTTCAGTCTC  | GTGGCGAAAC<br>CACCGCTTTG  |
| 2701 | CCGACAGGAC<br>GGCTGTCTTG  | TATAAAGATA<br>ATATTTCTAT | CCAGGCGTTT<br>GGTCCGCAAA | CCCCCTGGAA<br>GGGGACCTT  | GCTCCCTCGT<br>CGAGGGAGCA | GCGCTCTCCT<br>CGCGAGAGGA | GTTCCGACCC<br>CAAGGCTGGG  | TGCCGCTTAC<br>ACGGCGAATG  | CGGATACCTG<br>GCCTATGGAC  | TCCGCCTTTC<br>AGGCGGAAAAG |
| 2801 | TCCCTTCGGG<br>AGGGAAGCCC  | AAGCGTGGCG<br>TTCGCACCCG | CTTTCTCAAT<br>GAAAGAGTTA | GCTCACGCTG<br>CGAGTGCAGC | TAGGTATCTC<br>ATCCATAGAG | AGTTCGGTGT<br>TCAAGCCACA | AGGTCGTTTCG<br>TCCAGCAAGC | CTCCAAGCTG<br>GAGGTTTCGAC | GGCTGTGTGC<br>CCGACACACG  | ACGAACCCCC<br>TGCTTGGGGG  |
| 2901 | CGTTCAGCCC<br>GCAAGTCGGG  | GACCGCTGCG<br>CTGGCGACGC | CCTTATCCGG<br>GGAATAGGCC | TAACTATCGT<br>ATTGATAGCA | CTTGAGTCCA<br>GAACTCAGGT | ACCCGGTAAG<br>TGGGCCATTC | ACACGACTTA<br>TGTGCTGAAT  | TCGCCACTGG<br>AGCGGTGACC  | CAGCAGCCAC<br>GTCGTCCGTG  | TGTTAACAGG<br>ACCATTTGTC  |
| 3001 | ATTAGCAGAG<br>TAATCGTCTC  | CGAGGTATGT<br>GCTCCATACA | AGGCGGTGCT<br>TCCGCCACGA | ACAGAGTTCT<br>TGTCTCAAGA | TGAAGTGGTG<br>ACTTCACCAC | GCCTAACTAC<br>CGGATTGATG | GGCTACACTA<br>CCGATGTGAT  | GAAGGACAGT<br>CTTCCTGTCA  | ATTTGGTATC<br>TAAACCATAG  | TGCGCTCTGC<br>ACGCGAGACG  |
| 3101 | TGAAGCCAGT<br>ACTTCGGTCA  | TACCTTCGGA<br>ATGGAAGCCT | AAAAGAGTTG<br>TTTTCTCAAC | GTAGCTCTTG<br>CATCGAGAAC | ATCCGGCAAA<br>TAGGCCGTTT | CAAACCACCG<br>GTTTGGTGGC | CTGGTAGCGG<br>GACCATCGCC  | TGGTTTTTTT<br>ACCAAAAAAA  | GTTTGCAAGC<br>CAAACGTTTC  | AGCAGATTAC<br>TCGTCTAATG  |
| 3201 | GCGCAGAAAA<br>CGCGTCTTTT  | AAAGGATCTC<br>TTTCTTAGAG | AAGAAGATCC<br>TTCTTCTAGG | TTTGATCTTT<br>AAACTAGAAA | TCTACGGGGT<br>AGATGCCCCA | CTGACGCTCA<br>GACTGCGAGT | GTGGAACGAA<br>CACCTTGCTT  | AACTCACGTT<br>TTGAGTGCAA  | AAGGGATTTT<br>TTCCCTAAAA  | GGTCATGAGA<br>CCAGTACTCT  |
| 3301 | TTATCAAAAA<br>AATAGTTTTT  | GGATCTTCAC<br>CCTAGAAGTG | CTAGATCCTT<br>GATCTAGGAA | TTAAATTTAA<br>AATTTAATTT | AATGAAGTTT<br>TTACTTCAAA | TAAATCAATC<br>ATTTAGTTAG | TAAAGTATAT<br>ATTTTATATA  | ATGAGTAAAC<br>TACTCATTTG  | TTGGTCTGAC<br>AACCAGACTG  | AGTTACCAAT<br>TCAATGGTTA  |
| 3401 | GCTTAATCAG<br>CGAATTAGTC  | TGAGGCACCT<br>ACTCCGTGGA | ATCTCAGCGA<br>TAGAGTCGCT | TCTGTCTATT<br>AGACAGATAA | TCGTTTATCC<br>AGCAAGTAGG | ATAGTTGCCT<br>TATCAACGGA | GACTCCCCGT<br>CTGAGGGGCA  | CGTGTAGATA<br>GCACATCTAT  | ACTACGATAC<br>TGATGCTATG  | GGGAGGGCTT<br>CCCTCCCGAA  |
| 3501 | ACCATCTGGC<br>TGGTAGACCG  | CCCAGTGCTG<br>GGGTCACGAC | CAATGATACC<br>GTTACTATGG | GCGAGACCCA<br>CGCTCTGGGT | CGCTCACCCG<br>GCGAGTGGCC | CTCCAGATTT<br>GAGGTCTAAA | ATCAGCAATA<br>TAGTCGTTAT  | AACCAGCCAG<br>TTGGTTCGGT  | CCGGAAGGGC<br>GGCCTTCCCG  | CGAGCGCAGA<br>GCTCGCTCT   |
| 3601 | AGTGGTCTCTG<br>TCACCAGGAC | CAACTTTATC<br>GTTGAAATAG | CGCCTCCATC<br>GCGGAGGTAG | CAGTCTATTA<br>GTCAGATAAT | ATTGTTGCCG<br>TAACAACGCG | GGAAGCTAGA<br>CCTTCGATCT | GTAAGTAGTT<br>CATTATCAA   | CGCCAGTTAA<br>GCGGTCAATT  | TAGTTTGCGC<br>ATCAAACGCG  | AACGTTGTTG<br>TTGCAACAAC  |
| 3701 | CCATTGCTAC<br>GGTAACGATG  | AGGCATCGTG<br>TCCGTAGCAC | GTGTCACGCT<br>CACAGTGCGA | CGTCGTTTGG<br>GCAGCAAACC | TATGGCTTCA<br>ATACCGAAGT | TTCAGTCCG<br>AAGTCGAGGC  | GTTCCCAACG<br>CAAGGGTTGC  | ATCAAGGCGA<br>TAGTTCGGCT  | GTTACATGAT<br>CAATGTACTA  | CCCCCATGTT<br>GGGGGTACAA  |

## PvuI

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3801 GTGCAAAAAA GCGGTTAGCT CCTTCGGTCC TCCGATCGTT GTCAGAAGTA AGTTGGCCGC AGTGTATATCA CTCATGGTTA TGGCAGCACT GCATAATTCT
CACGTTTTTTT CGCCAATCGA GGAAGCCAGG AGGCTAGCAA CAGTCTTCAT TCAACCGGCG TCACAATAGT GAGTACCAAT ACCGTCGTGA CGTATTAAGA

ScaI

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3901 CTTACTGTCA TGCCATCCGT AAGATGCTTT TCTGTGACTG GTGAGTACTC AACCAAGTCA TTCTGAGAAAT AGTGTATGCG GCGACCGAGT TGCTCTTGCC  
GAATGACAGT ACGGTAGGCA TTCTACGAAA AGACACTGAC CACTCATGAG TTGGTTCAGT AAGACTCTTA TCACATACGC CGCTGGCTCA ACGAGAACGG

4001 CGGCGTCAAT ACGGGATAAT ACCGCGCCAC ATAGCAGAAC TTTAAAAGTG CTCATCATTG GAAAACGTTC TTCGGGGCGA AAACCTCTCAA GGATCTTACC  
GCCGCAGTTA TGCCCTATTA TGGCGCGGTG TATCGTCTTG AAATTTTCAC GAGTAGTAAC CTTTTGCAAG AAGCCCCGCT TTTGAGAGTT CCTAGAATGG

4101 GCTGTTGAGA TCCAGTTCGA TGTAACCCAC TCGTGCACCC AACTGATCTT CAGCATCTTT TACTTTTACC AGCGTTTTCTG GGTGAGCAAA AACAGGAAGG  
CGACAACCTCT AGGTCAAGCT ACATTGGGTG AGCACGTGGG TTGACTAGAA GTCGTAGAAA ATGAAAGTGG TCGCAAAGAC CCACTCGTTT TTGTCCTTCC

4201 CAAAATGCCG CAAAAAAGGG AATAAGGGCG ACACGGAAAT GTTGAATACT CATACTCTTC CTTTTTCAAT ATTATTGAAG CATTTATCAG GGTATTGTGTC  
GTTTTACGGC GTTTTTTCCC TTATTCGGC TGTGCCTTTA CAACTTATGA GTATGAGAAG GAAAAAGTTA TAATAACTTC GTAATAGTC CCAATAACAG

4301 TCATGAGCGG ATACATATTT GAATGTATTT AGAAAAATAA ACAAATAGGG GTTCCGCGCA CATTTCCCCG AAAAGTGCCA CCTGACGTCT AAGAAACCAT  
AGTACTCGCC TATGTATAAA CTTACATAAA TCTTTTTTATT TGTTTATCCC CAAGGCGCGT GTAAAGGGG TTTTCACGGT GGACTGCAGA TTCTTTGGTA

4401 TATTATCATG ACATTAACCT ATAAAAATAG GCGTATCAGG AGGCCCTTTC GTCTCGCGCG TTTCGGTGAT GACGGTGAAA ACCTCTGACA CATGCAGCTC  
ATAATAGTAC TGTAATTGGA TATTTTTATC CGCATAGTGC TCCGGGAAAG CAGAGCGCGC AAAGCCACTA CTGCCACTTT TGGAGACTGT GTACGTGCGA

4501 CCGGAGACGG TCACAGCTTG TCTGTAAGCG GATGCCGGGA GCAGACAAGC CCGTCAGGGC GCGTCAGCGG GTGTTGGCGG GTGTCGGGGC TGGCTTAACT  
GGCCTCTGCC AGTGTGGAAC AGACATTGCG CTACGGCCCT CGTCTGTTCC GGCAGTCCCG CGCAGTCGCC CACAACCGCC CACAGCCCCG ACCGAATTGA

## NdeI

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4601 ATGCGGCATC AGAGCAGATT GTACTGAGAG TGCACCATAT GGACATATTG TCGTTAGAAC GCGGCTACAA TTAATACATA ACCTTATGTA TCATACACAT
TACGCCGTAG TCTCGTCTAA CATGACTCTC ACGTGGTATA CCTGTATAAC AGCAATCTTG CGCCGATGTT AATTATGTAT TGGAATACAT AGTATGTGTA

4701 ACGATTTAGG TGACACTATA
TGCTAAATCC ACTGTGATAT