

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	
	CTTGCGCGGG	CGTTCGACTT	CGAAGCATGC	GACGTCCAGC	TGCTTAGGGG	CCCAATTAAT	TCTACTTCGC	TGCTACCTTT	TTCTTAAAGT	ATCGGCAGAG	
KpnI ~~~~~											
101	AGCAGCCAAC	CGCTTTAAGA	AAATCTCATC	CTCCGGGGCA	CTTGATTATG	GTACCCCAAC	TACTGCTTCT	GAAAATCTAT	ATTTTCAAGG	TGAACTAAAA	
	TCGTCGGTTG	GCGAAATTCT	TTTAGAGTAG	GAGGCCCCGT	GAAC TAATAC	CATGGGGTTG	ATGACGAAGA	CTTTTAGATA	TAAAAGTTCC	ACTTGATTTT	
201	ACTGCTGCTT	TGGCTCAACA	TGCGATTAAG	GGTGAAGCTC	AAAACTTAA	TGACTCTCAA	GCTCCAAAAG	CTGATGCGCA	ACAAAATAAC	TTCAACAAAG	
	TGACGACGAA	ACCGAGTTGT	ACGCTAATTC	CCACTTCGAG	TTTTTGAATT	ACTGAGAGTT	CGAGGTTTTC	GACTACGCGT	TGTTTTATTG	AAGTTGTTTC	
301	ATCAACAAAG	CGCCTTCTAT	GAAATCTTGA	ACATGCCTAA	CTTAAACGAA	GCGCAACGTA	ACGGCTTCAT	TCAAAGTCTT	AAAGACGACC	CAAGCCAAAG	
	TAGTTGT TTC	GCGGAAGATA	CTTTAGA A CT	TGTACGGATT	GAATTTGCTT	CGCGTTGCAT	TGCCGAAGTA	AGTTTCAGAA	TTTCTGCTGG	GTTCCGGTTTC	
401	CACTAACGTT	TTAGGTGAAG	CTAAAAAATT	AAACGAATCT	CAAGCACCGA	AAGCTGATAA	CAATTTCAAC	AAAGAACAAC	AAAATGCTTT	CTATGAAATC	
	GTGATTGCAA	AATCCACTTC	GATTTTTTAA	TTTGCTTAGA	GTTCGTGGCT	TTCGACTATT	GTAAAGTTG	TTTCTTGTTG	TTTTACGAAA	GATACTTTAG	
HindIII ~~~~~											
501	TTGAATATGC	CTAACTTAAA	CGAAGAACAA	CGCAATGGTT	TCATCCAAAG	CTTAAAAGAT	GACCCAAGCC	AAAGTGCTAA	CCTATTGTCA	GAAGCTAAAA	
	AACTTATACG	GATTGAATTT	GCTTCTTGTT	GCGTTACCAA	AGTAGGTTTC	GAATTTTCTA	CTGGGTTCGG	TTTCACGATT	GGATAACAGT	CTTCGATTTT	
601	AGTTAAATGA	ATCTCAAGCA	CCGAAAGCGG	ATAACAAATT	CAACAAAGAA	CAACAAAATG	CTTTCTATGA	AATCTTACAT	TTACCTAACT	TAAACGAAGA	
	TCAATTTACT	TAGAGTTCGT	GGCTTTCGCC	TATTGTTTAA	GTTGTTTCTT	GTTGTTTAC	GAAAGATACT	TTAGAATGTA	AATGGATTGA	ATTTGCTTCT	
701	ACAACGCAAT	GGTTTCATCC	AAAGCCTAAA	AGATGACCCA	AGCCAAAGCG	CTAACCTTTT	AGCAGAAGCT	AAAAAGCTAA	ATGATGCTCA	AGCACCAAAA	
	TGTTGCGTTA	CCAAAGTAGG	TTTCGGATTT	TCTACTGGGT	TCGGTTTCGC	GATTGGAAAA	TCGTCTTCGA	TTTTTCGATT	TACTACGAGT	TCGTGGTTTT	
801	GCTGACAACA	AATTCAACAA	AGAACAACAA	AATGCTTTCT	ATGAAATTTT	ACATTTACCT	AACTTAACTG	AAGAACAACG	TAACGGCTTC	ATCCAAGCC	
	CGACTGTTGT	TAAAGTTGTT	TCTTGTTGTT	TTACGAAAAGA	TACTTTAAAA	TGTAATGGA	TTGAATGAC	TTCTTGTTGC	ATTGCCGAAG	TAGGTTTCGG	
AscI ~~~~~											
901	TTAAAGACGA	TCCTTCGGTG	AGCAAAGAAT	AAGGCGCGCC	ACTTCTAAAT	AAGCGAATTT	CTTATGATTT	ATGATTTTTA	TTATTAAATA	AGTTATAAAA	
	AATTTCTGCT	AGGAAGCCAC	TCGTTTCTTA	TTCCGCGCGG	TGAAGATTTA	TTCGCTTAAA	GAATACTAAA	TACTAAAAAT	AATAATTTAT	TCAATATTTT	
1001	AAAATAAGTG	TATACAAAT	TTAAAGTGAC	TCTTAGGTTT	TAAAACGAAA	ATTCTTATTC	TTGAGTAACT	CTTTCCTGTA	GGTCAGGTTG	CTTTCTCAGG	
	TTTTATTCAC	ATATGTTTAA	AATTTCACTG	AGAATCCAAA	ATTTTGCTTT	TAAGAATAAG	AACTCATTGA	GAAAGGACAT	CCAGTCCAAC	GAAAGAGTCC	
BglII ~~~~~											
1101	TATAGTATGA	GGTCGCTCTT	ATTGACCACA	CCTCTACCGG	CAGATCCGCT	AGGGATAACA	GGGTAATATA	GATCTGTTTA	GCTTGCCTCG	TCCCCGCCGG	

ATATCATACT CCAGCGAGAA TAACTGGTGT GGAGATGGCC GTCTAGGCCA TCCCTATTGT CCCATTATAT CTAGACAAAT CGAACGGAGC AGGGGCGGCC  
 1201 GTCACCCGGC CAGCGACATG GAGGCCAGA ATACCCTCCT TGACAGTCTT GACGTGCGCA GCTCAGGGGC ATGATGTGAC TGTGCGCCGT ACATTTAGCC  
 CAGTGGGCCG GTCGCTGTAC CTCCGGTCT TATGGGAGGA ACTGTGAGAA CTGCACGCGT CGAGTCCCCG TACTACACTG ACAGCGGGCA TGTAATCGG

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1301 CATACATCCC CATGTATAAT CATTTCATC CATAcATTTT GATGGCCGCA CGGCGCGAAG CAAAAATTAC GGCTCCTCGC TGCAGACCTG CGAGCAGGGA
 GTATGTAGGG GTACATATTA GTAAACGTAG GTATGTAAAA CTACCGGCGT GCCGCGCTTC GTTTTTAATG CCGAGGAGCG ACGTCTGGAC GCTCGTCCCT

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1401 AACGCTCCCC TCACAGACGC GTTGAATTGT CCCACGCGG CGCCCTGTA GAGAAATATA AAAGGTTAGG ATTTGCCACT GAGGTTCTTC TTTCATATAC  
 TTGCGAGGGG AGTGTCTGCG CAACTTAACA GGGGTGCGGC GCGGGGACAT CTCCTTATAT TTTCCAATCC TAAACGGTGA CTCCAAGAAG AAAGTATATG

1501 TTCCTTTTAA AATCTTGCTA GGATACAGTT CTCACATCAC ATCCGAACAT AAACAACCAT GGGTAAGGAA AAGACTCACG TTTCGAGGCC GCGATTAAT  
 AAGGAAAATT TTAGAACGAT CCTATGTCAA GAGTGTAGTG TAGGCTTGTA TTTGTTGGTA CCCATTCTTT TTCTGAGTGC AAAGCTCCGG CGCTAATTTA

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1601 TCCAACATGG ATGCTGATTT ATATGGGTAT AAATGGGCTC GCGATAATGT CGGGCAATCA GGTGCGACAA TCTATCGATT GTATGGGAAG CCCGATGCGC
 AGGTTGTACC TACGACTAAA TATACCCATA TTTACCCGAG CGCTATTACA GCCCGTTAGT CCACGCTGTT AGATAGCTAA CATACCCTTC GGGCTACGCG

1701 CAGAGTTGTT TCTGAAACAT GGCAAAGGTA GCGTTGCCAA TGATGTTACA GATGAGATGG TCAGACTAAA CTGGCTGACG GAATTTATGC CTCTTCCGAC
 GTCTCAACAA AGACTTTGTA CCGTTTCCAT CGCAACGGTT ACTACAATGT CTACTCTACC AGTCTGATTT GACCGACTGC CTTAAATACG GAGAAGGCTG

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1801 CATCAAGCAT TTTATCCGTA CTCCTGATGA TGCATGTTA CTCACCCTG CGATCCCCG CAAAACAGCA TTCCAGGTAT TAGAAGAATA TCCTGATTCA  
 GTAGTTCGTA AAATAGGCAT GAGGACTACT ACGTACCAAT GAGTGGTGAC GCTAGGGGCC GTTTTGTCGT AAGGTCCATA ATCTTCTTAT AGGACTAAGT

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1901 GGTGAAAATA TTGTTGATGC GCTGGCAGTG TTCCTGCGCC GGTGTCATTC GATTCTGTT TGTAATTGTC CTTTAAACAG CGATCGCGTA TTTCGTCTCG
 CCACTTTTAT AACAACTACG CGACCGTCAC AAGGACGCGG CCAACGTAAG CTAAGGACAA ACATTAACAG GAAAATTGTC GCTAGCGCAT AAAGCAGAGC

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2001 CTCAGGCGCA ATCACGAATG AATAACGGTT TGGTTGATGC GAGTGATTTT GATGACGAGC GTAATGGCTG GCCTGTTGAA CAAGTCTGGA AAGAAATGCA  
 GAGTCCGCGT TAGTGCTTAC TTATTGCCAA ACCAACTACG CTCACTAAAA CTACTGCTCG CATTACCGAC CGGACAACCT GTTCAGACCT TTCTTTACGT

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2101 TAAGCTTTTG CCATTCTCAC CGGATTCAGT CGTCACTCAT GGTGATTTCT CACTTGATAA CTTTATTTT GACGAGGGGA AATTAATAGG TTGTATGAT
 ATTCGAAAAC GGTAAGAGTG GCCTAAGTCA GCAGTGAGTA CCACTAAAGA GTGAAGTATT GGAATAAAAA CTGCTCCCTT TTAATTATCC AACATAACTA

2201 GTTGACGAG TCGGAATCGC AGACCGATAC CAGGATCTTG CCATCCTATG GAACTGCCTC GGTGAGTTTT CTCTTCATT ACAGAAACGG CTTTTTCAAA

CAACCTGCTC AGCCTTAGCG TCTGGCTATG GTCCTAGAAC GGTAGGATAC CTTGACGGAG CCACTCAAAA GAGGAAGTAA TGTCTTTGCC GAAAAAGTTT

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2301 AATATGGTAT TGATAATCCT GATATGAATA AATTGCAGTT TCATTTGATG CTCGATGAGT TTTTCTAATC AGTACTGACA ATAAAAAGAT TCTTGTTTTC  
TTATACCATA ACTATTAGGA CTATACTTAT TTAACGTCAA AGTAAACTAC GAGCTACTCA AAAAGATTAG TCATGACTGT TATTTTTCTA AGAACAAAAAG

2401 AAGAACTTGT CATTGTGATA GTTTTTTTAT ATTGTAGTTG TTCTATTTTA ATCAAATGTT AGCGTGATTT ATATTTTTTTT TCGCCTCGAC ATCATCTGCC  
TTCTTGAACA GTAAACATAT CAAAAAATA TAACATCAAC AAGATAAAAT TAGTTTACAA TCGCACTAAA TATAAAAAA AGCGGAGCTG TAGTAGACGG

2501 CAGATGCGAA GTTAAGTGCG CAGAAAGTAA TATCATGCGT CAATCGTATG TGAATGCTGG TCGCTATACT GCTGTCGATT CGATACTAAC GCCGCCATCC  
GTCTACGCTT CAATTCACGC GTCTTTCATT ATAGTACGCA GTTAGCATACT ACTTACGACC AGCGATATGA CGACAGCTAA GCTATGATTG CGGCGGTAGG

SacII

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2601 AGTTTTAAACG AGCTCGAATT CATCGATGAT ATCAGATCCA CTAGTGGCCT ATGCGGCCGC GGATCTGCCG GTCTCCCTAT AGTGAGTCGT ATTAATTTTCG  
TCAATTTTGC TCGAGCTTAA GTAGCTACTA TAGTCTAGGT GATCACC GGA TACGCCGGCG CCTAGACGGC CAGAGGGATA TCACTCAGCA TAATTTAAAGC

2701 ATAAGCCAGG TTAACCTGCA TTAATGAATC GGCCAACGCG CGGGGAGAGG CGGTTTGCCT ATTGGGCGCT CTCCGCTTC CTCGCTCACT GACTCGCTGC  
TATTCGGTCC AATTGGACGT AATTACTTAG CCGGTTGCGC GCCCTCTCC GCCAAACGCA TAACCCGCGA GAAGGCGAAG GAGCGAGTGA CTGAGCGACG

2801 GCTCGGTCGT TCGGCTGCGG CGAGCGGTAT CAGCTCACTC AAAGGCGGTA ATACGGTTAT CCACAGAATC AGGGGATAAC GCAGGAAAGA ACATGTGAGC  
CGAGCCAGCA AGCCGACGCC GCTCGCCATA GTCGAGTGAG TTTCGCCCAT TATGCCAATA GGTGTCTTAG TCCCCTATTG CGTCCCTTCT TGTACTCTCG

2901 AAAAGGCCAG CAAAAGGCCA GGAACCGTAA AAAGGCCGCG TTGCTGGCGT TTTTCCATAG GCTCCGCCCC CCTGACGAGC ATCACAAAAA TCGACGCTCA  
TTTTCCGGTC GTTTTCCGGT CCTTGGCATT TTTCCGGCGC AACGACCGCA AAAAGGTATC CGAGGCCGGG GGAAGTCTCG TAGTGTTTTT AGCTGCGAGT

3001 AGTCAGAGGT GCGGAAACCC GACAGGACTA TAAAGATACC AGGCGTTTCC CCCTGGAAGC TCCCTCGTGC GCTCTCCTGT TCCGACCCTG CCGCTTACCG  
TCAGTCTCCA CCGCTTTGGG CTGTCTGAT ATTTCTATGG TCCGCAAAGG GGGACCTTCG AGGGAGCACG CGAGAGGACA AGGCTGGGAC GCGCAATGGC

3101 GATACCTGTC CGCCTTTCTC CCTTCGGGAA GCGTGGCGCT TTCTCAATGC TCACGCTGTA GGTATCTCAG TTCGGTGTAG GTCGTTTCGCT CCAAGCTGGG  
CTATGGACAG GCGGAAAGAG GGAAGCCCTT CGCACC GCGA AAGAGTTACG AGTGCACAT CCATAGAGTC AAGCCACATC CAGCAAGCGA GGTTGACCC

3201 CTGTGTGCAC GAACCCCCCG TTCAGCCCGA CCGCTGCGCC TTATCCGGTA ACTATCGTCT TGAGTCCAAC CCGGTAAGAC ACGACTTATC GCCACTGGCA  
GACACACGTG CTTGGGGGGC AAGTCGGGCT GCGCAGCGCG AATAGGCCAT TGATAGCAGA ACTCAGGTTG GGCCATTCTG TGCTGAATAG CCGTGACCGT

3301 GCAGCCACTG GTAACAGGAT TAGCAGAGCG AGGTATGTAG GCGGTGCTAC AGAGTTCTTG AAGTGGTGGC CTAACTACGG CTACACTAGA AGGACAGTAT  
CGTCGGTGAC CATTGTCCCTA ATCGTCTCGC TCCATACATC CGCCACGATG TCTCAAGAAC TTCACCACCG GATTGATGCC GATGTGATCT TCCTGTCATA

3401 TTGGTATCTG CGCTCTGCTG AAGCCAGTTA CTTTCGGAAA AAGAGTTGGT AGCTCTTGAT CCGGCAAACA AACCACCGCT GGTAGCGGTG GTTTTTTTGT  
AACCATAGAC GCGAGACGAC TTCGGTCAAT GGAAGCCTTT TTCTCAACCA TCGAGAACTA GGCCGTTTGT TTGGTGGCGA CCATCGCCAC CAAAAAACA

3501 TTGCAAGCAG CAGATTACGC GCAGAAAAA AGGATCTCAA GAAGATCCTT TGATCTTTTC TACGGGTCT GACGCTCAGT GGAACGAAAA CTCACGTTAA  
AACGTTCTGC GTCTAATGCG CGTCTTTTTT TCCTAGAGTT CTCTAGGAA ACTAGAAAAG ATGCCCCAGA CTGCGAGTCA CTTGCTTTT GAGTGAACCT

3601 GGGATTTTGG TCATGAGATT ATCAAAAAG ATCTTCACCT AGATCCTTTT AAATTA AAAA TGAAGTTTTA AATCAATCTA AAGTATATAT GAGTAAACTT  
CCCTAAAACC AGTACTCTAA TAGTTTTTCC TAGAAGTGGA TCTAGGAAAA TTTAATTTTT ACTTCAAAAT TTAGTTAGAT TTCATATATA CTCATTTGAA

3701 GGTCTGACAG TTACCAATGC TTAATCAGTG AGGCACCTAT CTCAGCGATC TGTCTATTTTC GTTCATCCAT AGTTGCCTGA CTCCCCGTCG TGTAGATAAC  
 CCAGACTGTC AATGGTTACG AATTAGTCAC TCCGTGGATA GAGTCGCTAG ACAGATAAAG CAAGTAGGTA TCAACGGACT GAGGGGCAGC ACATCTATTG

3801 TACGATACGG GAGGGCTTAC CATCTGGCCC CAGTGCTGCA ATGATACCGC GAGACCCACG CTCACCGGCT CCAGATTTAT CAGCAATAAA CCAGCCAGCC  
 ATGCTATGCC CTCCCGAATG GTAGACCGGG GTCACGACGT TACTATGGCG CTCTGGGTGC GAGTGGCCGA GGTCTAAATA GTCGTTATTT GGTCCGTCGG

3901 GGAAGGGCCG AGCGCAGAAG TGGTCCTGCA ACTTTATCCG CCTCCATCCA GTCTATTAAT TGTTGCCGGG AAGCTAGAGT AAGTAGTTCG CCAGTTAATA  
 CCTTCCCGGC TCGCGTCTTC ACCAGGACGT TGAAATAGGC GGAGGTAGGT CAGATAATTA ACAACGGCCC TTCGATCTCA TTCATCAAGC GGTCAATTAT

4001 GTTTGCGCAA CGTTGTTGCC ATTGCTACAG GCATCGTGGT GTCACGCTCG TCGTTTGGA TGGCTTCATT CAGCTCCGGT TCCCAACGAT CAAGGCGAGT  
 CAAACGCGTT GCAACAACGG TAACGATGTC CGTAGCACCA CAGTGCGAGC AGCAAACCAT ACCGAAGTAA GTCGAGGCCA AGGGTTGCTA GTTCCGCTCA

PvuI

4101 TACATGATCC CCCATGTTGT GCAAAAAAGC GGTTAGCTCC TTCGGTCCCTC CGATCGTTGT CAGAAGTAAG TTGGCCGCAG TGTATCACT CATGGTTATG  
 ATGTACTAGG GGTACAACA CGTTTTTTCG CCAATCGAGG AAGCCAGGAG GCTAGCAACA GTCTTCATTC AACCGGCGTC ACAATAGTGA GTACCAATAC

ScaI

4201 GCAGCACTGC ATAATTCTCT TACTGTCATG CCATCCGTAA GATGCTTTTC TGTGACTGGT GAGTACTCAA CCAAGTCATT CTGAGAATAG TGTATGCGGC  
 CGTCGTGACG TATTAAGAGA ATGACAGTAC GGTAGGCATT CTACGAAAAG ACAC TGACCA CTCATGAGTT GGTTCAGTAA GACTCTTATC ACATACGCCG

4301 GACCGAGTTG CTCTTGCCCG GCGTCAATAC GGGATAATAC CGCGCCACAT AGCAGAACTT TAAAAGTGCT CATCATTGGA AAACGTTCTT CGGGCGGAAA  
 CTGGCTCAAC GAGAACGGGC CGCAGTTATG CCCTATATATG GCGCGGTGTA TCGTCTTGAA ATTTTCACGA GTAGTAACCT TTTGCAAGAA GCCCCGCTTT

4401 ACTCTCAAGG ATCTTACCGC TGTTGAGATC CAGTTCGATG TAACCCACTC GTGCACCCAA CTGATCTTCA GCATCTTTTA CTTTCACCAG CGTTTCTGGG  
 TGAGAGTTCC TAGAATGGCG ACAACTCTAG GTCAAGCTAC ATTGGGTGAG CACGTGGGTT GACTAGAAGT CGTAGAAAAT GAAAGTGGTC GCAAAGACCC

4501 TGAGCAAAAA CAGGAAGGCA AAATGCCGCA AAAAAGGGAA TAAGGGCGAC ACGGAAATGT TGAATACTCA TACTCTTCCT TTTTCAATAT TATTGAAGCA  
 ACTCGTTTTT GTCCTTCCGT TTTACGGCGT TTTTCCCTT ATTCCCGCTG TGCCTTTACA ACTTATGAGT ATGAGAAGGA AAAAGTTATA ATAACCTCGT

4601 TTTATCAGGG TTATTGTCTC ATGAGCGGAT ACATATTTGA ATGTATTTAG AAAAATAAAC AAATAGGGGT TCCGCGCACA TTTCCCCGAA AAGTGCCACC  
 AAATAGTCCC AATAACAGAG TACTCGCCTA TGTATAAACT TACATAAATC TTTTATTTG TTTATCCCA AGGCGCGTGT AAAGGGGCTT TTCACGGTGG

4701 TGACGTCTAA GAAACCATTA TTATCATGAC ATTAACCTAT AAAAATAGGC GTATCACGAG GCCCTTTCGT CTCGCGCGTT TCGGTGATGA CCGTGAAAAC  
 ACTGCAGATT CTTTGGTAAT AATAGTACTG TAATTGGATA TTTTATCCG CATAAGTCTC CGGGAAAGCA GAGCGCGCAA AGCCACTACT GCCACTTTTG

4801 CTCTGACACA TGCACTCCC GGAGACGGTC ACAGCTTGTC TGTAAGCGGA TGCCGGGAGC AGACAAGCCC GTCAGGGCGC GTCAGCGGGT GTTGGCGGGT  
 GAGACTGTGT ACGTCGAGGG CCTCTGCCAG TGTCGAACAG ACATTGCGCT ACGGCCCTCG TCTGTTCCGG CAGTCCCAGC CAGTCGCCCA CAACGCCCA

NdeI

4901 GTCGGGGCTG GCTTAACTAT GCGGCATCAG AGCAGATTGT ACTGAGAGTG CACCATATGG ACATATTGTC GTTAGAACGC GGCTACAATT AATACATAAC  
 CAGCCCCGAC CGAATTGATA CGCCGTAGTC TCGTCTAACA TGACTCTCAC GTGGTATACC TGTATAACAG CAATCTTGCG CCGATGTTAA TTATGTATTG

5001 CTTATGTATC ATACACATAC GATTTAGGTG ACACTATA  
 GAATACATAG TATGTGTATG CTAATCCAC TGTGATAT

